

# DPW Automation Pamphlet



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Assistant Chief of Staff for Installation Management  
Plans and Operations Directorate  
DPW Automation Pamphlet 2002

## EXECUTIVE SUMMARY

The Program Integration Office (PIO) publishes the DPW Automation Pamphlet as a means of informing the DPW community, and the rest of the Army, of current and planned automation initiatives, which affect the DPW. Included are systems for which the Assistant Chief of Staff for Installation Management (ACSIM) is the proponent, and others which may impact the DPW, but have proponents in other parts of the ACSIM or the U.S. Army Corps of Engineers.

I hope this pamphlet is of value to you. Our vision is to provide timely access to authorized users, on a global basis, to consistent, integrated ACSIM data using the best business solutions available in a cost effective manner to support ACSIM's decision-making and operations.

General business trends occurring in ACSIM and other Army agencies are driving the need for change in business processes and automation support. In most cases, these trends are prevalent in government and commercial business environments worldwide. The systems used by ACSIM must support an increasing user base worldwide while facing changing and demanding user expectations and requirements. The security threats of today target every organization and system in existence and are continually changing and becoming more destructive. ACSIM must be able to react immediately to these threats, assess their potential impacts, and judge the best preventative actions for Army installations and systems.

The PIO's vision of our systems in the 21<sup>st</sup> century is to have a series of standardized and integrated systems available throughout all the installations that provides the user at any level within the organization up to date information on the status of Army installations. It is no longer acceptable to have to wait several days for information that sometimes is almost a year old. Authorized users will be able to up date this information as appropriate. Commanders will have available a series of tools that enables them to appropriately define a strategy by identifying what was done in the past and lessons learned; being able to adapt to current constraints and issues in the present; and being able to anticipate future challenges.

As ACSIM's needs and requirements change, and as the Transformation of Installation Management becomes a reality, we will be able to introduce new technologies and systems while having minimal impact on our current systems and infrastructure.

Our first priority in reaching this vision is to establish integrated, standardized logical databases. All systems should get their data from the integrated databases and reference one data point for the same data item. This integrated logical database will consist of a series of physical databases but the user will see it as one. The data that is unique to a system will be contained in a separate yet standardized database whereas the data that is shared among systems will be contained in a single logical database. There will be one "database of record" for ACSIM – not the numerous and inconsistent ones that currently exist. Also, this will reduce or eliminate the artificial freeze dates imposed by the systems themselves. The logical database may be divided into separate physical databases for many reasons including security constraints, performance considerations, and limitations of the database management systems (DBMS).

In keeping with our mandate of operating more efficiently, the PIO systems need to be web based. For all new systems development efforts that have a large user base, these systems will be designed as web based from the initial development stage. For our existing systems, we will determine the feasibility of migrating them to web based architecture. Having our systems web base will have numerous benefits

including reduced maintenance costs, lower training costs, quicker turn around on releasing updates to software, greater assurance that everyone is running the same version of software, and increased user satisfaction.

By realizing the PIO's strategy, we will have a uniformed way of delivering the right information to the authorized personnel at the appropriate level of detail at the right time using the best tools available. Our users will see "one" application accessing this information – regardless of their functional role. They will not have to learn what applications house what information and how to access that information – this will be transparent to them. Similarly, the look, feel, and operation of these applications will be consistent across all our applications. It will not be obvious to the user who developed the application, when it was developed, and what technology was used.

When dealing with non-standard data and applications, the PIO will create "cross walk" systems that migrate the data from the non-standard format to the standardized database. This will enable the PIO to effectively replace older applications with new applications while minimizing any impacts to our overall architecture. The standard applications will be interfacing only with standardized data and will not be concerned with the origins of this data. The PIO will establish a single, logical data store that manages the information for analysis, reporting, and archival. It is a business oriented, integrated, time-variant, and non-volatile collection of data that supports management analysis, planning, and decision- making.

The initial steps have been started in the transition to an Enterprise system. This is not an easy process and will take years before the users will see the benefits. The Installation Management Gateway Enterprise (IMaGE) is in development and should be available in the Spring of 2002 for all users. It is ACSIM's Enterprise information portal. It provides users with a web-based system that integrates data from key installation management systems such as ASIP, HQEIS, HQRPLANS and HQISR.

If you have any questions pertaining to a particular system contact the proponent listed for that system. Any question related to systems which you would like to add to the pamphlet (or any other problems), please contact Tony Vajda, [Anthony.Vajda@hqda.army.mil](mailto:Anthony.Vajda@hqda.army.mil), 703 428-6156, the ACSIM point of contact for the pamphlet.

COL PETER PORCELLI

Director of Plans and Operations

Assistant Chief of Staff for Installation Management

## ARMY BRIDGE INVENTORY SYSTEM (BIS)

### DESCRIPTION

The Army Bridge Inventory System (BIS) is based on the Federal Highway Administration's (FHWA) "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges" and is used for reporting to the FHWA. It is the same system used by all states and federal agencies with a few Army unique fields added.

BIS is used for :

- Adding a National Bridge Inventory (NBI) record, inspection record and maintenance record.
- Editing a NBI record, inspection record and maintenance record.
- Printing SI & A sheets, Inspection and Maintenance sheets.
- Running the NBI, Inspection and Maintenance reporting query.
- Reporting to the Federal Highway Administration (FHWA).

BIS is sponsored by the Directorate of Civil Works of the U.S. Army Corps of Engineers, and the Office of the Army Chief of Staff for Installation Management (OACSIM).

### OBJECTIVE

Reporting of all Public Bridges is required by:

- Public Law 95-599
- Code of Federal Regulations (23 CFR 650)
- 23 U.S. Code 151, Bridge Inspection Standards
- AR 420-72 Transportation Infrastructure

CBIS is used to report to the FHWA on the inventory of Army Bridges and the status of the bridges.

### BACKGROUND

The ACSIM coordinates with FHWA to provide a uniform and cost-effective system for managing the public access bridge inventory. Installations are responsible for funding inspection of bridges every two years.

### IMPLEMENTATION ASSISTANCE

U.S. Army Engineer Research and Development Center (ERDC), Waterways Experiment Station (WES), provides training classes, workshops and technical and reporting assistance on BIS to Army installations. Installations are responsible for funding assistance on inventory and inspection.

### POINTS OF CONTACT

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## ARMY CRITERIA TRACKING SYSTEMS (ACTS)

### DESCRIPTION

The Army Criteria Tracking system (ACTS) provides a single source of the facility planning criteria at the Category Code level used in the Army legacy facility planning systems, Facility Planning System (FPS) and Real Property Planning and Analysis System (RPLANS). Algorithms are used to apply space-planning criteria to the Facility Category Group (FCG) level.

### OBJECTIVE

ACTS is the Army's official repository of consolidated space planning and utilization criteria with references to sources of design criteria and RPLANS algorithms. Because space planning and utilization criteria sources are many and varied, the latest information has not always reached planners, programmers and space utilization managers at all levels. Time was often wasted in researching current criteria delaying projects for further justification. The system aids planners, programmers and space utilization managers of facilities requirements at installation, MACOM and DA levels.

### SYSTEMS INTERFACE

Data Sources include:

- US Army Corps of TI 800-01
- US Army Corps of Engineers Facility Design Standard Definitives
- Headquarters, Department of the Army functional proponents for design criteria
- US Army Corps of Engineers Technical Bulletins and other publications

ACTS provides criteria data used in:

- Facility Planning System (FPS)
- Real Property Planning and Analysis System (RPLANS)

### CURRENT STATUS

- Fully operational as a Worldwide Web-based site
- Accessible to anyone with web access at <http://acts.rkeng.com>
- Content is continually reviewed and updated as necessary

### PLANS AND MILESTONES

- The system is currently operational
- Approximately one third of the content is reviewed annually
- Other content is updated as new criteria are published

### POINTS OF CONTACT

Bob Nichols, Contract Representative, ACSIM, DAIM-MD, [Robert.Nichols@hqda.army.mil](mailto:Robert.Nichols@hqda.army.mil), 703 693-6053

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Access web site at <http://www.acts.rkeng.com>

## **ARMY ENVIRONMENTAL DATABASE (AEDB)**

### **DESCRIPTION**

The Army Environmental Database (AEDB) is a centralized database that contains data from the following Army environmental reporting systems: Environmental Program Requirements (EPR), Environmental Quality Report (EQR), Defense Sites Environmental Restoration Tracking System (DSERTS), Restoration Cost-To-Complete System (RCTCS), Installation Status Report-Environment (ISR II), and the Environmental Compliance Assessment System (ECAS).

### **OBJECTIVE**

The purpose of AEDB is to provide users with a central repository that contains data from restoration, compliance, conservation, and pollution prevention program areas as well as the funding requirements that are associated with them. Installation, MACOM, and Headquarters users have access to a set of automated tools that contain pre-defined reports that allow them to review and analyze this data.

### **SYSTEM INTERFACE**

- Data Sources include:
- EPR
- EQR
- ISR II
- DSERTS
- RCTCS
- ECAS

### **CURRENT STATUS**

- Fully operational as a World Wide Web based site
- Accessible to anyone with web access and a valid password.

### **PLANS AND MILESTONES**

- The system is currently operational
- Continue to enhance AEDB as a one-stop-shop for Army environmental information

### **POINTS OF CONTACT**

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# ARMY STATIONING AND INSTALLATION PLAN (ASIP)

## DESCRIPTION

The Army Stationing and Installation Plan is a major data integration effort that encompasses Army organization authorization, personnel management, command and control, training, dependent information, active and reserve component, and field input databases in order to produce an accurate and coherent picture of stationing and daily population loads on Army installations worldwide covering the Army budget cycle. The ASIP is the official Army database of populations on Army installations worldwide. The ASIP is a baseline for installation planning that provides a consistent look at forces to be supported and provides visibility of potential planning issues. Authority for the ASIP is AR 5-18.

## OBJECTIVE

To provide an automated capability to identify Army population by location to feed installation requirement generation systems. Ensure that data is consistent and auditable to official Army sources.

## SYSTEMS INTERFACE

Data Sources include:

- Structure And Manpower Allocation System (SAMAS) authorized strengths for Army organizations
- The Army Authorization Document System (TAADS) authorized strength for derivative elements of Army organizations and Military Grade Distribution information
- Status of Resources and Training System (SORTS) home station information for Army organizations
- Army Training Resources and Requirements System (ATRRS) daily training loads for Army schools
- Standard Installation and Division Personnel System (SIDPERS) Army Reserve and National Guard derivative unit information
- Defense Eligibility Enrollment Requirements System (DEERS) Six categories of dependents, retirees, and active and reserve component military, not on base, within a 40-mile radius of the Base.
- Training Evaluation and Support System (TESS) - Reserve Component Annual Training Loads by location
- Defense Civilian Personnel Database System (DCPDS) for National Guard Full-Time Support personnel and Tenants Other Than Army information
- Field Input Databases for undocumented derivative Army unit information and Tenant Other Than Army information

ASIP provides feeder data to:

- Headquarters RPLANS (HQ-RPLANS) – Installation Population data, TESS training load population data, and Other Surrounding Population.
- Installation Status Report (ISR) Part III – Installation population data for Service Based Costing
- Integrated Facilities System (IFS) – Army unit/organizational information for inclusion in the facilities inventory
- Army Installation Management-Headquarters Information (AIM-HI) – Army BASOPS Requirements generation
- DD Form 1390, Military Construction Program – Installation population totals.
- ARSTAF/ACSIM Analysts – Base population data for presentation to Congressional, DOD, and



Army requestors

## CURRENT STATUS

- Full Web-Based Application – no proprietary client software required
- Internet Accessible by all levels of the Army with valid password
- Updated Annually to correspond to the Army's M-force lock and distributed in September
- Access controlled through ACSIM, Plans and Operations Division
- Installation/MACOM update information via the ASIP web editor
- MACOMs Review and Approve Installation Edits via the ASIP web editor
- Currently used and updated by all Active Army, Army Reserve, and National Guard

## PLANS AND MILESTONES

- The system is currently operational.
- Historical database under development for display on the ASIP web viewer
- AR 5-18 and DA Pam 5-18 update this FY
- Map Display Capability
- Realign ASIP to support Transformation of Installation Management (TIM)

## POINTS OF CONTACT

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## **CATHODIC PROTECTION (CP) DIAGNOSTIC (CPDIAG)**

### **DESCRIPTION**

Many installations use cathodic protection (CP) systems to protect underground storage tanks (UST's), metallic buried pipes and elevated water storage tanks against corrosion. If CP systems fail or malfunction, these structures are no longer protected. Proper maintenance of CP systems requires trouble-shooting and the evaluation of large amounts of data. This is a difficult task for many installations because they do not have personnel trained in CP and corrosion control. In addition, U.S. Environmental Protection Agency regulations have made it mandatory to monitor the CP systems protecting UST's and their piping. CP Diagnostic is a tool to assist facilities engineers in improving maintenance and repair strategies for CP systems. It pinpoints systems, which are not providing adequate coverage, based on background information (e.g., structure data, anode and test point data, rectifier specifications) and data from field measurements (e.g., structure-to-soil potential, rectifier currents, voltages). CP Diagnostic can also identify systems whose performance has shown a marked decline over time.

### **OBJECTIVE**

The objective of the CP Diagnostic system is to provide installations with:

- Cost avoidance with timely and appropriate project selection
- Reduced effort to determine which projects are needed most
- Improved condition of the CP systems and protected structures
- Reduced backlog of maintenance and repair (BMAR)
- A permanent, organized, easily accessible repository for CP system information
- A basis for allocating available maintenance funds in an optimal manner

### **BACKGROUND**

The CP Diagnostic system was developed by the Construction Engineering Research Laboratory (CERL), Champaign, IL, to assist installations in evaluating, trouble-shooting and maintaining data on CP systems for underground piping, UST's and elevated water storage tanks. A DOS version was released in the early 1990s. A Windows version has been developed.

### **SYSTEMS INTERFACE**

- The DOS version of CP Diagnostic operates on an IBM-AT or compatible microcomputer with hard drive and 640 kilobytes of random access memory.
- The Windows version of CP Diagnostic operates on an IBM-compatible computer running Windows 95 or higher.

### **CURRENT STATUS**

- CP Diagnostic for Windows 1.0 Beta version is available.

### **PLANS AND MILESTONES**

Several enhancements to the Windows version have been proposed, including interface with installation CAD/GIS maps and interface with telemetry or remote monitoring systems.

## POINT OF CONTACT

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## COMPUTER AIDED FACILITY MANAGEMENT SYSTEMS (CAFMS)

### DESCRIPTION

Computer Aided Facility Management Systems (CAFMS) is a family of computer software systems developed to meet the needs of intensive facilities management at Army installations. The CAFMS family of systems uses existing data sources, including CADD data, allow facility managers to collect and record additional data, and provide tools to manipulate, analyze and display the resulting data.

### OBJECTIVE

CAFMS permit the rapid calculation of Facility Utilization Rates. They also provide a repository for detailed information about a facility, which is not currently available in other corporate databases. CAFMS serve as integrators, which can pull together different databases and systems and portray their information in both textual and graphic formats. CAFMS are intended to supplement existing systems, not to replace them. For example RPLANS/HQRPLANS are the official source of facilities "allowances". A CAFMS can take RPLANS allowances and allow facility managers to manipulate and analyze data to develop "Requirements". These "Requirements" are then input RPLANS and justifications recorded in RPLANS to establish the installation's official Tabulation of Existing and Required Facilities (TAB).

### BACKGROUND

CAFMS have been developed over a number of years, with concepts going back over several decades. More recently, developing technology began placing these applications within the financial capability of installation managers. The newer systems allow automated data exchanges with key Army systems, including IFS, LANS and ISR. Many of the systems are commercial applications and can be tailored to meet installation's specific.

### SYSTEMS INTERFACE

CAFMS receive data from:

- IFS - Real Property Inventory
- RPLANS – Allowances
- FPS/ACTS – Criteria
- ASIP - Force structure
- CADD - Floor plans and drawings
- ISR-I - Facility condition data

CAFMS Provide data to:

- IFS-M - Real property updates (reports). RPLANS - Requirements and justification.

### CURRENT CONFIGURATION

FM systems link CADD data to other (non-graphic) facility databases to improve information accessibility and management. They allow rapid, consistent updating of basic information maps (BIMS) and drawings, as well as creation of new, special purpose maps. While more limited than GIS, the distinction is blurring, and the term is less frequently used. This intermediate area is also sometimes described as Computer Assisted Facility Management (CAFM). CAFM generally refers to relational database systems, which use CADD displays for query output. Typical examples of CAFM are the commercial Facility Information System (FIS) used by some activities for detailed (workstation level) space management, and MAXIMO, a facility maintenance management system.

## PLANS AND MILESTONES

Continue to assist users in selecting the proper system to support their needs. DoD has vested responsibility for coordinated development of CADD and GIS data standards with the CADD/GIS Center for Facilities, Infrastructure and Environment (CGCFIE), supported by the Engineer Research and Development Center (ERDC) at Vicksburg, MS. The Center supports the Facility Management Standard (FMS), a mandatory standard for CAFMS.

## POINT OF CONTACT

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## CONGRESSIONAL VIEW (CV)

### DESCRIPTION

The CONGRESSIONAL VIEW System (CV) provides Congressional staffers, and HQDA analysts and managers with an a web based, browser accessible copies of DD Form 1391's generated during the Congressional Add process for the MCA, AFH, MCARNG, MCAR programs, as well as the President's Budget "Green Books" for MCA and AFH. CV uses a secure mainframe database server, available over the web, on the PAX portal environment, with UserID and password control. CV is a repository of the DDForm 1391 PDF files for easy and quick access of Congressional Add and President's Budget DDForm 1391s.

### OBJECTIVE

CongressionalView shall provide staffers and program managers with an easy-to-use web based, browser accessed copies of DD Form 1391s that have been submitted to Congress, for quick availability at the portable, virtual desktop.

### BACKGROUND

CV was requested in January 2002, with an initial version completed within two weeks. CV, in support of Army initiatives, was created in a fully web-based, browser-accessed environment, for a portable, and virtual desktop.

### CURRENT STATUS

CV is currently functional and available to users of the PAX portal environment.

### PLANS AND MILESTONES

Current plans are to adjust to any requests from Congressional staffers and program managers in ASA (FM), ASA (IE), and ASC (IM). Integrate with the Army AKM initiative and the Army portal.

### POINTS OF CONTACT

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# **CONSTRUCTION APPROPRIATION PROGRAMMING CONTROL & EXECUTION SYSTEM (CAPCES)**

## **DESCRIPTION**

The Construction Appropriations Programming Control and Execution System (CAPCES) provides the Army with an integrated suite of web based, browser accessed tools and databases to formulate, develop, report, modify, maintain, archive, and store military construction (MILCON) project information in support of budget activities. CAPCES is the only automated source of project information for various construction programs during the planning, programming and budgeting phases of the PPBES process. CAPCES uses a secure mainframe based database server, available over the web (WebCAPCES), on the PAX portal with UserID and password control. CAPCES is an original source of program, planning and budget MILCON data on the MCA, AFH and MMCA programs; and partial program and planning data for BCA, NAF, BUP, PIK, ECIP (Army), DBOF (Army) and DERF (Army) programs. CAPCES also uses other existing sources for data, most notably, 1391 data from the DD Form 1391 Processor System and Directive data from the DIRNET module. CAPCES provides data feeds to several systems including the Army PROBE system, ACSIM's EIS/GIS, and RPLANS systems, and the USACE DIRNET system. CAPCES allows users to manage and track MILCON programs at work progress, project level detail, from project inception through the full life cycle of each project. CAPCES, through the PAX portal, provides a web browser interface via NIPRNET and the Internet.

CAPCES also provides program managers with easy to use, commercial-off-the-shelf (COTS) web based self-service and ad-hoc reporting tools, in an open environment, for real-time, accurate program/project information in support of individual's functional tasks. CAPCES' emphasis is on project planning, programming and budget execution, in order to develop and produce specific MILCON budget displays during the PRB, POM, BES and President's Budget, as well as continual tracking and management of budget programs in order to successfully defend those budgets for Congressional authorization and appropriation.

## **OBJECTIVE**

CAPCES shall provide program managers with needed automation tools to support production of accurate MILCON budget books and budget displays. CAPCES uses a real-time web based environment for needed budget programming, planning and execution functions at task level, to maintain authorization, appropriation, and construction controls for MILCON budget. CAPCES' automation suite is designed to provide work output in support of program managers daily tasking, and not simply data gathering. An automation objective of the system is to integrate with data sources and provide data feeds among systems to reduce tedious tasks of analysts and managers.

Supporting the Army portal initiatives, CAPCES will continue to meet all requirements of current DoD and Army regulations. CAPCES' automation objective is to increasingly move in the direction of a dynamic, rich, virtual desktop, with increasing reliance on abilities to track, sort, graph, analyze, integrate, model, project and/or display text, data, pictures, maps, sound, animation and "appliances" on an enterprise-wide, secure platform with state-of-the-art telecommunications.

## **BACKGROUND**

Early in 1977, work began to automate the annual MCA budget program. At that time, the MCA program consisted of approximately 100-200 projects and was already a monumental program to manage. Since then, the MCA program has both grown and shrunk tremendously. When done manually, the final tasks

involved 10-15 individuals, working long shifts (including several all-nighters), seven to ten days to with production of somewhat small sized 'acceptable' budget books. Still errors were commonplace, and the format was not up to par with current technology or expectations. Using the automated process, linking CAPCES and the DD Form 1391 Processor with real-time updates by the many offices involved with project/program formulation, the final steps of printing the budget books have been reduced from days to hours.

Over the years (1978 to present) CAPCES' automated database capabilities and dependability has been instrumental in the effective management of the MCA program (and other programs). As with all automation it also inspired an increased demand for accurate, highly detailed reports and information. The system's COTS software has been able to mend those demands and more, with very little additional investment.

## SYSTEMS INTERFACE

CAPCES is a logical integration of information from several sources. CAPCES automates the management as well as manages the assemblage of project and program information during synchronous, and often discordant, efforts of installations, MACOMs, Army staff, USACE Districts and Divisions, OCE, DOD, OMB, and Congress. Where possible and appropriate direct data interface and/or integration is used. In others, direct data entry is used. CAPCES directly and indirectly interfaces with systems such as: Program Optimization and Budget Evaluation (PROBE), Program and Fund Distribution Control System (PFDCS), Army's Resource Formulation System (RFS), ACS (IM)'s Real Property Planning System (RPLANS), EIS/GIS, Installation Status Report (ISR), DD Form 1391 Processor systems, and the U.S. Army Corps of Engineers Financial Management System (CEFMS), and Design Directives module (DIRNET).

## CURRENT STATUS

Current directions are to make use of the available end-user desktop web tools and mainframe web-enabled COTS, local networks, and browser based technologies, to provide low-cost, fast, integrated, worldwide accessible information. This concept will maintain the investment in the current database, existing library of reports, and end-user familiarity with ad-hoc reporting. It will also provide reliable backup and quality on-line availability, to meet user demands for a user friendly, state-of-the-art, accurate information system that performs or assists with the performance of functional work requirements.

## PLANS AND MILESTONES

Current plans include new reports for the Transformation of Installation Management structure, implementation of web-based easy-to-use commercial software for tabulation, graphs, and picture and map linkage to reports. Developer tools will also be implemented. Integrate with the Army AKM initiative and the Army portal.

## POINTS OF CONTACT

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## **DD FORM 1391 PROCESSOR SYSTEM (DD1391)**

### **DESCRIPTION**

The DD Form 1391 is used by the Department of Defense to submit to Congress requirements and justifications in support of funding requests for military construction. The DD Form 1391 Processor System is an interactive computer program which assists users in preparing, submitting, reviewing, correcting, printing, and archiving the DD Forms 1391 and associated data, in accordance with AR 415-15, "Military Construction, Army Program Development". The system currently accommodates projects for the following major programs: Military Construction, Army (MCA); Production Base Support (PBS); Army Family Housing (AFH); Non-Appropriated Funds (NAF); Maintenance and Repair (M&R); Army and Air Force Exchange Service (AAFES); Medical Facilities (MED); Defense Finance and Accounting Service (DFAS); Payment-In-Kind (PIK); Defense Logistics Agency (DLA); Commercially-Financed Facilities (CFF); Base Closure, Army (BCA); Special Operations Program (SOP); Section 6 Schools (S6S); Shared Energy Savings (SES); Chemical Demilitarization (ChemD); Ballistic Missile Defense Organization (BMDO); National Missile Defense (NMD); Theater Missile Defense (TMD); and Relocatable Buildings (RB). Over 25,000 forms are now maintained via the DD Form 1391 Processor System, with approximately 200 forms completed and archived annually. The US Army Engineering and Support Center, Huntsville (formerly Huntsville Division), as Assigned Responsible Agency (ARA) for the DD Form 1391 Processor System, is tasked to provide fielding, operation, enhancements, maintenance, documentation, hotline assistance, and training to our customers worldwide. System users cover an extremely broad spectrum of unique needs and requirements associated with policies and procedures governing the DD 1391 form and related documentation. Customers supported by the system include Army installations, major subordinate commands (MSCs), major commands (MACOMs), USACE Districts and Divisions, USACE, HQDA, and DoD personnel involved in the military construction process. The system provides:

- Assistance in preparation of the following documents: DD Form 1391 and Continuation page DD Form 1391c, Planning and Design Data, and supporting justification.
- Automated assistance in generating project-supporting data; to include cost estimates, project requirement, and deficiency data.
- Automatic distribution of DD1391 forms to the appropriate MSC/MACOM, Process Manager, and the U.S. Army Corps of Engineers District and Division.
- Automatic tracking of the status of a project as it proceeds through review channels. By accessing the system, the user can monitor the project and see any modification, alteration, and review comments concerning it. The user can determine the exact location of the project at any time during the Military Construction Planning and Programming process. Users at all organizational levels access the latest version of a DD1391 form and supporting data.
- Access to review comments made by various offices as project is submitted and/or returned for correction by higher headquarters.
- Printing of forms in formal Congressional Budget Book format as well as other formats to assist technical reviewers at all organizational levels.
- Windows-based software programs are currently available for three Tabs of the DD1391 Form: PC-Cost is a cost estimating package which supports Tab A (and the ENG3086 Form), ECONPACK is the economic analysis package which supports Tab D, but utilized by all Services, and ISCE is an information systems cost estimating package developed for Tab F.
- Access to historical information for monitoring changes made to each field of data once a form is submitted to higher headquarters. Additionally, a history of all form submittals and returns is automatically maintained in the system.
- Controlled access to project being programmed by other activities for the sharing of information.

With the approval of the creator of a DD1391 Form, a copy of the form may be electronically permitted to another user to "read."

- Multiple data retrieval procedures to generate listings of project information in many different formats. Additionally, all system users may access the directory of archived forms, which represents DD1391 form projects, which have been successful in the programming and planning process.
- On-line newsletter to provide dissemination of the latest guidance and information concerning the DD Form 1391 Processor System.
- Automated assistance in preparation, review and printing of DD1390 Forms in accordance with AR 415-15, Military Construction, Army Program Development. The DD Form 1390 is used by the Department of Defense to submit to Congress a consolidation of the Military Construction Program in relation to personnel strengths, real property, real property improvements, and the installation mission and functions. Preparation and/or modification of DD1390 Forms are made with minimal effort since much of the supporting data is automatically extracted from other automated systems. The DD1390 Module extracts information from the DD Form 1391 Processor System, the Construction Appropriations Programming Control and Execution System (CAPCES), the Headquarters, Integrated Facility System (HQIFS) and the Army Stationing and Installations Plan (ASIP).

## OBJECTIVE

The DD1391 Processor provides computerized assistance to engineers at every level of the Army to identify, quantify and justify military construction worldwide.

## BACKGROUND

The DD Form 1391 Module was developed by the Construction Engineering Research Laboratory in Champaign, IL. Since initial fielding in 1980 by Huntsville Center, the system has undergone extensive modifications and enhancements. In March 1999, the Huntsville Center fielded a web-based version of the DD1391 Processor System. The System was upgraded to modernize, improve efficiency and to increase the system capacity for new work.

## SYSTEMS INTERFACE

The DD 1391 Processor produces a basic document for the budget system. It exchanges data with CAPCES and as the basic building block of the MCA, PBS, AFH, NAF, M&R, AAFES, MED, DLA, CFF, BCA, SOP, S6S, SES, DFAS, PIK, BMDO, ChemD, NMD, TMD, and RB programs, it directly and indirectly affects many systems.

## CURRENT STATUS

Currently, there are approximately 1,000 individual users worldwide (utilizing 450 PAX System IDs). The DD1391 Processor currently contains over 25,000 forms.

## PLANS AND MILESTONES

In the past, the PAX/DD1391 Processor System was located on a contractor computer. In March 2002, the PAX System was moved to a government-owned computer at DISA in Mechanicsburg, PA.

## POINTS OF CONTACT

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## **DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM (DSERTS)**

### **DESCRIPTION**

The Defense Site Environmental Restoration Tracking System (DSERTS) is a web-based data collection and ad hoc reporting system, residing on the World Wide Web (WWW). DSERTS enables the user to establish and maintain a database pertaining to environmental cleanup and to submit reports to higher headquarters. DSERTS is used to collect and maintain remediation information and to generate reports using the information. The U.S. Army Environmental Center (USAEC) manages the DSERTS.

### **OBJECTIVE**

The DSERTS contains site information for Army active and Base Realignment and Closure (BRAC) installations. The DSERTS is the principal source of information for the Army's contribution to the Annual Report to Congress, which the DoD submits as required by 10 USC 2706. This Annual Report provides Congress with information on accomplishments of the Defense Environmental Restoration Program (DERP). The DSERTS system is also used by the Army to report its DERP status at in-progress reviews and to assist in the development of Army Installation Action Plans (IAP) and BRAC Cleanup Plans (BCP).

### **SYSTEMS INTERFACES**

- DSERTS provides data that is migrated or exported to the following databases:
- Army Environmental Database (AEDB)
- DoD's Restoration Management Information System (RMIS)
- Restoration Cost To Complete System (RCTCS)

### **CURRENT STATUS**

- Version 4.6 is fully operational as a Worldwide Web-based site
- Internet accessible by all levels of the Army with valid password
- Content is continually reviewed and updated semi-annually

### **PLANS AND MILESTONES**

- The system is currently operational
- An upgraded version will be released for the Fall 2002 data call
- DSERTS and RCTCS will be combined and replaced by the AEDB DSERTS ii for the DSERTS Spring 2003 data call

### **POINTS OF CONTACT**

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## **DIRECTIVE NETWORK (DIRNET)**

### **DESCRIPTION**

The DIRECTIVE NETWORK System (DIRNET) provides the Corps of Engineers with an integrated suite of web based, browser accessed tools to create, process, route, disseminate, report, maintain and store design and construction project work directives. DIRNET uses a secure mainframe database server, available over the web (WebDIRNET), on the PAX portal environment, with UserID and password control. DIRNET is an original source of design and construction work directive data for the MCA, AFH, BCA, NAF, BUP, PIK, ECIP (Army), DBOF (Army) and DERF (Army), TriCare Medical (DoDMed), and "Support for Others" programs. As a major module of CAPCES, DIRNET has a direct data interface with CAPCES. DIRNET has two classifications of users, "Sender" and "Receiver." DIRNET provides numerous supportive processes for Senders, such as 'copy', 'edit', 'view', 'review', 'release', 'history', and individualized standard 'paragraphs.' DIRNET, through the PAX portal provides a web browser interface via NIPRNET and the Internet.

### **OBJECTIVE**

DIRNET shall provide program managers with easy-to-use web based; browser accessed functional tools in support of design and construction work directives, for work accomplished at the portable, virtual desktop.

### **BACKGROUND**

DIRNET started out as a mainframe, character based application in the early 1980s. In the late 1980s DIRNET was converted to a client-server application. DIRNET, in support of Army initiatives, moved to a fully web-based, browser-accessed environment, for a portable, and virtual desktop.

### **CURRENT STATUS**

All DIRNET functions along with several new functions have been implemented in the web environment. DIRNET interfaces with CAPCES databases for increased accuracy of information dissemination.

### **PLANS AND MILESTONES**

Current plans include new reports and end-user functionality. This will be accomplished after behind-the-scenes, simplified record storage in the database. Integrate with the Army AKM initiative and the Army portal.

### **POINT OF CONTACT**

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## **ECONPACK VERSION 2.1.2 (ECONPACK)**

### **DESCRIPTION**

ECONPACK is an economic analysis (cost-effectiveness analysis) computer package available to personnel throughout the Department of Defense and the Government. The ECONPACK program is used to develop EAs in support of military construction (MILCON) and MILCON-related programs, and other programs such as information management systems, resource management, other procurement, and capital investments. ECONPACK is a comprehensive program incorporating economic analysis calculations, documentation, and custom reporting capabilities. There are currently over 1,500 Corps, Army, DOD and other Government users. ECONPACK includes the capability to upload/download files to/from the DD Form 1391 Processor application, which is located on the U.S. Army Corps of Engineers' Programming Administration and Execution (PAX) computer system. This interchange capability enables analysts to develop EAs in ECONPACK on their PCs and upload EA data to an electronic DD Form 1391 located on a central system. ECONPACK performs standardized life cycle cost calculations such as net present value, savings-to-investment ratio, benefit-to-investment ratio, and discounted payback period. Sensitivity analysis features and graphics capabilities are also included in the ECONPACK program. Text entry is permitted for assumptions, alternative definitions, cost derivations, non-monetary costs and benefits, and results and recommendations. The program's output reports conform to current DOD Guidance and can be customized according to user preferences.

### **OBJECTIVE**

ECONPACK is structured so that non-economists can use it to prepare complete economic analyses in support of DOD and Government funding requests and for capital investment decisions. The U.S. Army Corps of Engineers initially designed ECONPACK for Directorate of Engineering and Housing activities at installations and field operating activities. However, the program is now used by many other Government activities.

### **BACKGROUND**

Originally developed by the US Army Corps of Engineers, Pacific Ocean Division, and the Construction Engineering Research Laboratory under the sponsorship of HQUSACE, ECONPACK has been managed by the US Army Engineering and Support Center, Huntsville since 1985.

### **SYSTEMS INTERFACE**

ECONPACK interfaces with Tab D (Economic Analysis) in the PAX/DD Form 1391 Processor System.

### **HARDWARE/SOFTWARE REQUIREMENTS**

Your hardware/software must meet the following minimum requirements to support access and use of ECONPACK:

- IBM Compatible Personal Computer (Pentium or greater, 166 Mhz CPU, CD-Rom)
- Microsoft Mouse or compatible pointing device
- 30 (or higher) Megabytes of RAM
- 25 Megabytes of hard disk space
- VGA or SVGA Monitor
- 28.8 Baud (or higher) Hayes Compatible Modem or Internet Access

- Microsoft Windows 95 (Build 708 or higher), 98, 2000, or NT 4.0 (build 1391 & service pack 3 or higher)
- HP or Compatible Laser Printer
- Screen Resolution of 800x600 or higher

#### DISTRIBUTION

ECONPACK is available to Government personnel and can be downloaded from the following website:  
[www.hnd.usace.army.mil/paxspt](http://www.hnd.usace.army.mil/paxspt)

#### POINTS OF CONTACT

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## ENGINEER AND BASE OPERATIONS SUPPORT SYSTEM (ENBOSS)

### DESCRIPTION

ENBOSS is the suite of software used by U.S. Army Reserve Engineers at the Regional Support Commands (RSCs), USAR Installations, and USAREng Directorate (now Installation Management Agency (IMA) – Army Reserve Office (ARO), Army Reserve Directorate (ARD), and subordinate offices). Its purpose is to support Army Reserve Engineers in managing the U.S. Army Reserve inventory of facilities throughout the life cycle of a facility, from acquisition through disposal.

The ENBOSS suite of software contains the following client-based modules: Engineer Management Automation, Army Reserve (EMAAR) system, Resource Information System, Engineer Reserve (RISER), the Army Reserve Geographic Information Support System (ARGISS) and a supporting security module. There is a series of web-based tools to enhance collaborative transactions among the organization elements, and offices outside the Engineer community.

#### Engineering Management Automation, Army Reserve (EMAAR)

- The EMAAR module is intended for use by Army Reserve Engineers at the eleven Regional Support Commands (RSCs), 7<sup>th</sup> Army Reserve Command (ARCOM), U.S. Army Reserve Installations, U.S. Army Reserve Commands (USARC), and the Office of the Chief, Army Reserve (OCAR). Its purpose is to support Army Reserve Engineers in managing the Army Reserve inventory of facilities throughout the life cycle of a facility, from acquisition through disposal.
- The EMAAR modules are Real Estate; Units Management; ProjDoc (Project Documentation for MILCON); FYP (Future Year Plan); EPM (Engineer Project Management); Reports; User Utilities; System Administration; Force File Interface; Collaborative Alerts, Automated MTOE/TDA Annotation, and the IFS Interface.
- These modules access a set of common databases using an asynchronous replication methodology inherent to the relational database management system. Each module supports a different managerial requirement in the facility life cycle.
- EMAAR includes imbedded algorithms that compute space requirements per AR 140-483. These figures form the basis for the DD Form 1390 and DD Form 1391 required as part of the military construction justification and approval process.

#### Resource Information System, Engineer, Reserve (RISER)

- RISER originated out of the need to track costs by facility for leases, utilities, and the maintenance and repair of Army Reserve facilities. It was developed as one of the ENBOSS modules, and adheres to the ENBOSS standards.
- RISER provides the capability to track and balance costs for Army Reserve owned and leased facilities. RISER functionality revolves around the existence of a Work Order (DA Form 4283) and its' associated costs. It tracks maintenance, repair, lease, utility, and environmental costs. These costs can further be broken down by various Army Reserve accounting codes. Management Decision Execution Package (MDEP), Army Management Structure Code (AMSCO), Account Processing Code (APC), Technical Data Activity Code (TDAC), and Element of Resource (EOR) are the accounting codes tracked by RISER.
- To aid with the tracking of costs and maintenance of Army Reserve facilities, RISER creates, saves, and tracks financial information by means of standard DOD and DA forms. Forms



supported by RISER include the Military Interdepartmental Purchase Request (MIPR), Miscellaneous Obligation Document (MOD), DD250, Purchase Request and Commitment (PR&C), DD1155, SF1034, and “Other” financial documents. The “Other” Financial Document supports cost tracking for documents that RISER does not produce automatically. Additional financial documents may be supported in future versions of RISER.

- To facilitate the tracking of utility accounting data, RISER has the ability to interface with a Consolidated Utility Payment (CUP) Provider. Vendor and work order information can be exported to the CUP provider from RISER. After the CUP provider makes a payment, the accounting data can be then imported into RISER.

### Army Reserve Geographic Information Support System (ARGISS)

ARGISS originated out of the Army Reserve’s need to consolidate facility-related data from various sources and to report on that data using a GIS user interface. The modules of ARGISS are The Data Bridge, Facility Planning System (FPS) and Plan View.

- The Facility Planning System (FPS) was fielded as the first application to use the ARGISS toolbox, providing a user-friendly way to report on facility-related data, both in map and tabular form. We later added two new applications into its toolbox: PlanView and the Environmental Planning System (EPS), an application that helped users report on environmental-related data. The geographical information system (GIS) interface in ARGISS uses the over-the-counter GIS software MapInfo that provides a platform to make the data “mapable”. InfoMaker provides a number of predetermined tabular report formats to view the consolidated Army Reserve data and the capability to make additional “elegant” reports.
- The Data Bridge consolidates Army Reserve facility-related data originating from various sources and file formats (SyBase, MS Excel, FoxPro and MS Access), and allows ARGISS users to perform simple queries on that data. The most significant enhancement to the Data Bridge is the addition of a Data Bridge “Wizard” to assist in setting up queries and the redesign of the Relationship Reference Creation process. There are many options for working with queries. Queries can be created, opened, edited, closed, deleted, saved, saved with a different name, designated as Public, Private, or Read-only, and run to retrieve the results from the database(s). The SQL generated by the query can also be viewed. The output of a query can be viewed within Data Bridge or exported to an MS Excel spreadsheet. It can also be saved in any of the Data Bridge supported formats.
- Plan View enables the user to view layouts of Army Reserve facility site plans and floor plans. These plans come from different sources in differing formats, and must go through a conversion process in order to be suitable for PlanView. This process enhances the layout, however, by converting a typical raster image to a vector image. Also, the process orients a facility with true geographic direction and assigns a correct longitude and latitude to the buildings. When the process is complete, the plans are stored as MapInfo files and registered in PlanView.

### OBJECTIVE

The system maintains information for:

- Facility database of record (proposed, with existing facilities populated from IFS)
- Units information
- Development of scope, documentation, and justification required for major and minor construction projects (MILCON)
- Reporting requirements
- Management of the operations and maintenance of existing facilities
- Tracking of facility utilization.

## BACKGROUND

The Army Reserve Engineer (now the IMA – Army Reserve Office Director) is the Army Staff proponent for ENBOSS. The Strategic Plans and Policy Directorate of IMA -ARO provides program management while the Concepts Development Branch of IMA -ARD is responsible for the configuration control, maintenance, enhancements, and distribution of new releases. The IMA-ARO has established an investment review board, in the form of the Integration Steering Committee, to validate any information technology investment and ensure compliance with the tenets of Clinger-Cohen.

## SYSTEMS INTERFACE

ENBOSS provides interfaces, which satisfy the need for U.S. Army Reserve data to be reflected in Active Army component systems that are feeding the budget process. The Integrated Facility System (IFS) and the Force File Interface provide the IT support needed to more effectively participate in the budget process. These interfaces also eliminate the need for users to enter shared data into multiple systems.

In addition, the RISER module provides an interface to two standard Army accounting systems: database Commitment Accounting System (dbCAS, also known as dCAS) and Computerized Accounts Payable System (CAPS). dbCAS maintains commitments and obligations data. Commitment data is sent electronically to dbCAS from RISER. dbCAS, in turn, interfaces with the Standard Army Financial System (STANFINS). Once dollars have been allocated to the committed data, the obligated dollars are imported into RISER from dbCAS.

RISER also provides an electronic interface to exchange purchase request information with the Standard Procurement System (SPS) via the SPS Aquiline interface. This interface eliminates the need to enter purchase request information into Aquiline and SPS, virtually eliminating redundancy of data entry.

CAPS tracks accruals and disbursements. CAPS information is entered and maintained in RISER and can then be exported to CAPS electronically.

## CURRENT STATUS

ENBOSS, and all its related applications, is a mature system. Electronic interfaces are executed nightly on a batch basis to maintain alignment with standard systems. The Integration Steering Committee provides configuration management control and recommends software and hardware modifications based on sound business methodologies, assuring compliance with the Clinger-Cohen Act. The current development plan for ENBOSS calls for an annual software upgrade, with a possible maintenance upgrade six months after to maintain the application in the most current software standard.

## PLANS AND MILESTONES

We will release the third version of ENBOSS in January 2003. This release focuses its' enhancements on further alignment of the EMAAR module with IFS by optimizing the use of category codes to identify the function of a facility.

The FY04 release of ENBOSS will concentrate in the capture of graphical data (GIS, Computer Aided Design, Photos) and general documents related to Army Reserve environmental, real estate, and master planning actions into a central repository with a web based portal as the graphical user interface. This new version further aligns the suite of software with the knowledge management goals of the Army.

## POINTS OF CONTACT

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## **ENGINEERED MANAGEMENT SYSTEMS**

### **Infrastructure Maintenance and Repair Management**

Engineered Management Systems (EMSs) are a set of tools that help Directorates of Public Works (DPWs) develop and prioritize infrastructure maintenance and repair (M&R) work plans. The goal of the EMS is to maximize the long-term benefits of facility M&R investments.

EMSs contain the following: methods for describing and obtaining facility inventory; quantitative, engineering-based procedures for facility inspection (including automated inspection techniques); quantitative condition assessment (i.e. a condition index ranging in value from 0 to 100) based on inspection results; models for predicting facility degradation and future condition; condition analysis technologies; procedures for identifying current M&R needs and predicting future needs; and procedures for developing annual and long range work plans based on various constraints (such as budget). These procedures are automated for use by the DPW's.

The US Army Corps of Engineers has developed the following EMS software packages: PAVER, for pavement management; RAILER, for railroad management; ROOFER, for roof management; BUILDER, for building management, and HEATER for exterior heating line management.

Two additional systems are currently available for implementation, Underground Gas Piping (GPIPER) and Underground Water Piping (WPIPER)

## BUILDING ENGINEERED MANAGEMENT SYSTEM (BUILDER)

### DESCRIPTION

BUILDER is a building asset Engineered Management System that helps engineers and managers assess building problems, perform a condition assessment using condition indexes and other metrics including remaining service life, determine sustainment, restoration and modernization (SRM) requirements including costs, and direct resources to those needs which will result in the greatest return on investment. BUILDER provides a building inventory sufficient to support SRM planning, systematic inspections at different levels of detail, an assessment and analysis of facility conditions (past, present, future) from the component up to the installation level, an identification of SRM needs (present and future), and through user specified standards, policies, prioritization criteria, and budget constraints creates SRM plans. Combined with the IMPACT simulation program multi-year “what-if” scenarios can be run to provide a future view of the condition and M&R needs for building assets. All BUILDER (and IMPACT) information is accessed through a series of reports and may also be displayed spatially through a built-in GIS program. BUILDER imports existing Army IFS and ISR data along with ROOFER EMS data. Additionally, BUILDER incorporates the Navy’s Mission Dependency Index (MDI) to help rank building importance and BUILDER is linked to the MAXIMO Computerized Maintenance Management System (CMMS) to provide the logical tie between work planning and execution. The BUILDER program requires a computer with Windows 98, NT, or 2000, and minimums of 30 megabytes of hard disk storage, 128MB RAM, and 500MHz processor. BUILDER, with IMPACT, is distributed through the BUILDER Support Center at the University of Illinois.

### OBJECTIVE

To provide installations with a true asset management system for SRM planning that provides for or results in:

- Assurance that mission execution dependent on buildings can be met,
- A structured, engineering-based, risk-based approach to building asset management,
- Knowledge of individual building inventory, condition, and other SRM decision support metrics,
- A consolidated “big picture” (what’s there, what’s wrong, what needs to be done and when, how much money is needed, etc.) including historic, environmental, seismic, and compliance issues of all of the buildings at the installation,
- Improved building condition and performance, though knowledgeable SRM decision making, including a focus on what’s truly important,
- The ability to “harvest” and consolidate the maximum amount of information available regarding buildings,
- Reduced backlogs of maintenance and repair (BMAR) through reduced penalty costs,
- A basis for developing and utilizing indefinite delivery and job order contracting (JOC) contracts,
- A basis for allocating funds where they will provide the greatest return on the investment and needs,
- A basis and a means for rapidly developing Annual Work Plans and long-range budgets for the installation's buildings,
- A knowledge based approach for inspection planning and execution,
- Warranty tracking,
- Reduced costs for periodic building inspection and reporting,
- A consolidated and automated depository of building work history, and
- A communication link between the “corporate” real property database (IFS), ISR evaluation data, facility inspection and condition assessment information, SRM needs assessment and planning,

and SRM execution.

## BACKGROUND

The BUILDER system was developed and is being advanced by the Engineering Development and Research Center, Construction Engineering Research Laboratory (ERDC-CERL) to provide a uniform system for managing building assets. ERDC-CERL is responsible for developments and enhancements to BUILDER and is designated as the BUILDER Center of Technical Expertise. ERDC-CERL provides technical assistance with implementing using both in-house and contract methods, computer advice on hardware and software, computer support services, and training. Training is scheduled, coordinated, and administered through the University of Illinois BUILDER Support Center.

## CURRENT STATUS

BUILDER is under development and is being tested for all of the buildings at the Army Research Laboratory (ARL) and for selected buildings for Special Operations Command at Fort Bragg. BUILDER is also being tested at select regions of the Army Reserve Command. BUILDER is being demonstrated for selected facilities throughout the Navy and Coast Guard. Numerous civilian Governmental agencies and companies are testing BUILDER. Version 2.1 is available for testing. Included with this version is the supplemental BUILDER RED program for use with handheld computers to speed inventory and inspection data entry and IMPACT Version 1.0.

## PLANS AND MILESTONES

The Army decision to implement BUILDER will depend upon successful development of BUILDER. To use BUILDER, an implementation process is required to build the inventory and inspection database and create the GIS coverage's. This implementation does not require that all buildings be surveyed. Building data are first harvested from IFS and the ISR to populate an initial database. Using MDI procedures, attention is drawn to the most important buildings where a more detailed inventory and inspection can be conducted. Afterwards, routine building inspection data (at various levels of detail determined from importance, condition, and remaining service life) are used to update the condition analysis and SRM planning process. When ROOFER EMS is in use, BUILDER will regularly harvest that data for use in the various analyses and IMPACT simulations. This overall process makes BUILDER affordable. BUILDER is being enhanced by ERDC-CERL to include non-condition (obsolescence) and criticality metrics to components as well as the process (business rules) for establishing the values for those metrics. Also, ERDC-CERL is working on enhanced condition prediction models, SRM planning, and other features.

## POINTS OF CONTACT

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## GAS PIPE MANAGEMENT SYSTEM (GPIPER)

### DESCRIPTION

The corrosion status of piping in inaccessible locations such as underground gas distribution systems is difficult to determine. This lack of knowledge about the corrosion status or life expectancy of the piping system severely inhibits the ability of the facilities engineer to make cost effective decisions concerning the maintenance of the system. GPIPER is a tool to assist facilities engineers in improving maintenance and repair strategies for underground gas distribution systems. It estimates the present corrosion status of pipes and predicts the future corrosion status based on soil and pipe information. It predicts when the first leak will occur in each section of the system and it prioritizes the sections for maintenance. This provides the DPW with a budget-planning tool so that the funds available for maintenance can be better allocated. GPIPER consists of an inventory database and routines to retrieve and analyze data.

### OBJECTIVE

The objective of the GPIPER system is to provide installations with:

- Cost avoidance with timely and appropriate project selection for natural gas piping systems
- Reduced effort to determine which projects are needed most
- Improved condition of the gas distribution system and user satisfaction
- Reduced backlog of maintenance and repair (BMAR)
- A permanent, organized, easily accessible repository for piping system information
- An objective method for pipe condition rating, assessment, and prioritization of repair/replacement projects
- A basis for allocating available maintenance funds in an optimal manner

### BACKGROUND

The Construction Engineering Research Laboratory (CERL), Champaign, IL, to provide a uniform system for managing gas distribution systems, developed the GPIPER system. GPIPER was originally developed for use on a mainframe computer. The current DOS-based version runs on an IBM-compatible personal computer.

### SYSTEMS INTERFACE

GPIPER is a DOS-based program. It was originally designed to run on an IBM-XT, AT, or compatible system with 640K of RAM and a hard disk drive, and DOS 3.1 or higher. Most of today's users will run the program in a DOS window under Windows 3.1, 95, 98, or 2000.

### CURRENT STATUS

GPIPER is currently ready for implementation throughout the Army. The program and user manual may be downloaded from: <http://www.cecer.army.mil/usmt/gpiper/gpiper.htm>.

### POINT OF CONTACT

Vicki Van Blaricum, CERL technical POC, CEERD-CF-M, [v-vanblaricum@cecer.army.mil](mailto:v-vanblaricum@cecer.army.mil),  
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## THE HAZARDS OF ASBESTOS AND LEAD OPTIMAL MANAGEMENT (HALO) SYSTEM

### DESCRIPTION

The Hazards of Asbestos and Lead Optimal Management (HALO) system is designed to assist Army personnel in performing lead and asbestos hazard inspections or risk assessments. The HALO program uses algorithms of current applicable regulations to interpret the data in order to manage family housing and other structures that have lead and/or asbestos hazards associated with them. The program serves to standardize:

- Collection and analysis of risk assessment data.
- Development of installation lead hazard and/or asbestos hazard management plans.
- Establishment of interim and long term lead hazard control strategies.
- Provide guidance in managing lead and asbestos.

### OBJECTIVE

The objective of the HALO program is to assist Army installations in managing housing units and non-residential buildings that may contain lead and/or asbestos related hazards by taking as input the hazard information and giving as output the required disclosure documents and management plans customized for their installation. A second objective is to enable the collection of ancillary data for worker protection issues.

### BACKGROUND

For a person responsible for a large number of housing units and/or non-residential buildings, the task of keeping track of all the details regarding facility lead and asbestos testing data collected and remedial actions taken is formidable. Given the many responsibilities of today's environmental staff even the management of a small number of units many require more management time than is available. This is the rationale for the development of HALO by the Materials Science and Technology Division (FL-M) of the Facilities Technology Laboratory (FL), U.S. Army Construction Engineering Research Laboratories.

### IMPLEMENTATION ASSISTANCE

The program runs under Microsoft Windows 95®, 98®, ME®, NT®, or 2000® operating systems. The hardware requirements are similar to those that are needed to run the operating system. Requirements include a Pentium class processor, 16 MB of random access memory (RAM) and 10 megabytes (MB) of hard disk space for the program. Additional hard disk space is required to hold the lead hazard data. A mouse is required since there are some user actions that do not have keyboard equivalents. The program will run on portable computers as well as on desktop computers.

### POINTS OF CONTACT

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## HEAT DISTRIBUTION SYSTEM ANALYSIS TOOLS: HEATER AND HEATMAP

### DESCRIPTION

Many of the DoD's steam and hot water distribution systems are severely deteriorated, unreliable, inefficient, and expensive to operate. Finding the best solution to these problems is a difficult and complex process. Some installations are choosing to completely abandon their large central plants and distribution systems in favor of a "decentralized" system in which small gas-fired boilers are installed in each building. Others are choosing to keep and modernize all or part of their existing central systems. Many are seeking the assistance of third-party providers through ESPC contracts, operation and maintenance contracts, or privatization. Making a bad decision can have consequences for many years. Therefore, it is important to consider all relevant factors and use consistent, engineering-based procedures to ensure that the best alternative is chosen. HeatMap is a commercially available software tool developed by Washington State University that has been made available to DoD for a nominal fee. The HEATER Engineered Management System is a companion product developed by CERL. Together, these tools can provide comprehensive, consistent, and technically sound analysis of energy supply alternatives. Both existing and proposed alternatives can be analyzed quickly and easily so that the best one can be chosen.

### OBJECTIVE

The objective of HEATER and HeatMap is to provide installations with the following capabilities for the existing energy supply system, as well as for proposed repairs, replacements, expansions, and upgrades:

- Complete thermal and hydraulic analysis
- Estimate of capital costs
- Estimate of energy costs
- Estimate of life cycle costs
- Feasibility assessment of upgrades and expansions
- Emissions estimates
- Quantitative condition assessment
- Prediction of future condition for various courses of action
- Feasibility analysis of steam to hot water conversion
- Optimization of pipe and plant sizes
- Feasibility analysis of alternative energy sources such as geothermal and combined heat and power (CHP)

### BACKGROUND

The Construction Engineering Research Laboratory (CERL), Champaign, IL, as a companion product to HeatMap, developed HEATER. HEATER focuses on maintenance and repair planning, including condition assessment and prediction. The Washington State University (WSU) Cooperative Extension Energy Program for providing thermal, flow, and economic analysis for heat distribution systems developed HeatMap. HeatMap is available to Army users at a greatly reduced cost via a special agreement between the Army and WSU. The two products together can provide a comprehensive and consistent system for analyzing and managing heat distribution systems.

## SYSTEMS INTERFACE

HEATER and HeatMap are designed for the IBM-compatible PC with a Pentium microprocessor, and the Windows 95, 98, or NT operating system. The computer should have at least 64 MB of RAM, and 100 MB free space on the hard drive. Users must obtain a proprietary hardware lock through the points of contact listed below. Users are also required to have AutoCAD Release 14 for Windows.

## CURRENT STATUS

HeatMap is currently available. HeatMap analysis has supported several Army heating plant modernization projects under the Central Energy Plant Modernization program. HEATER is currently being field tested at two Army installations and is being used to support planning for repair, replacement, and modernization projects. A test version of HEATER is currently available.

## PLANS AND MILESTONES

A final version of HEATER will be released after field-testing is completed in late FY02. DecentMap, which is an add-on product to HeatMap for analysis of decentralized heating systems, is planned for completion during FY02. New versions of HeatMap are released periodically.

## POINTS OF CONTACT

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## PAVEMENT MANAGEMENT SYSTEM

### DESCRIPTION

PAVER is an Engineered Management System (EMS) that helps engineers and managers manage the pavement network, determine sustainment, restoration and modernization (SRM) requirements, and direct resources to maximize return on investment. PAVER assists with pavement inventory, systematic random sample inspections, assessment of pavement conditions, calculation of Pavement Condition Index (PCI), identification and prioritization of preventive and safety maintenance and repair needs, major repairs, global maintenance, future pavement condition prediction, and produce annual and multi-year SRM work plans.

### OBJECTIVE

The Micro PAVER program provides the installation with the following benefits:

- Improved pavement condition and user rideability.
- Provide necessary information to manage available funds where they will provide the greatest return on the investment.
- A tool for developing Annual Work Plan, Long Range Plan and Unconstrained Requirements Report.
- Automated cost analysis reports to help determine the most effective maintenance and repair projects.
- Common ground for communication between installation and MACOM engineers.
- An objective procedure for pavement condition rating.
- A basis for specifying the results expected from contract pavement maintenance operations.
- A database for maintaining a specified level of pavement condition.

### BACKGROUND

The Engineer Research and Development Center (ERDC), Construction Engineering Research Laboratory (CERL), to provide a uniform and cost-effective system for managing pavements, developed the PAVER system. The microcomputer version of PAVER called Micro PAVER has been in the field since 1984. The PAVER system has been implemented at 80 Army sites, 36 Air Force bases, 14 Navy installations, and approximately 200 cities and counties. There are several hundred general aviation airports using micro PAVER in 16 states. There are 420 known subscribers/users in North America and an estimated 500 to 1000 airports using PAVER or PAVER PCI concepts. The American Public Works Association (APWA) alone has established PAVER databases for over 70 cities and counties. PAVER is also used by several foreign Air Forces, including the British Royal Air Force and the Royal Netherlands Air Force.

### IMPLEMENTATION ASSISTANCE

The Engineer Research and Development Center (ERDC), Construction Engineering Research Laboratory (CERL), provides assistance for managing pavements, implementing and using the PAVER system, and providing training classes. The current version of Micro PAVER is 4.2.5 for Windows, released November 1999. To make Micro PAVER program operate efficiently and effectively, the recommended minimum hardware requirement is: Pentium III 500Mhz processor, 500 MB hard drive, super VGA monitor, 64 MB of RAM, Windows 95/98/NT/2000.

## POINTS OF CONTACT

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## RAILROAD TRACK ENGINEERED MANAGEMENT SYSTEM (RAILER)

### DESCRIPTION

RAILER is a railroad track Engineered Management System that helps engineers and managers assess railroad track problems and perform a condition assessment against the Army Track Standards, Condition Indexes. Installation Status Reports (ISR), use RAILER to determine maintenance and repair SRM requirements including costs, and direct resources to those needs which will result in the greatest return on investment. AR 420-72 says the DPW is responsible for inspection, maintenance, repair and improvements to railroads and tracks located on Army installations and Army owned land. The minimum required condition levels are provided in TM 5-628, Railroad Track Standards. RAILER provides a detailed railroad network and track inventory, systematic inspections, assessment of facility conditions, and identification of SRM needs. All RAILER information is accessed through a series of reports and may also be displayed spatially through the supplemental RAILER GIS program. The RAILER program requires a computer with Windows 98, NT, or 2000, and minimums of 30 megabytes of hard disk storage, 256MB RAM, and 500MHz processor. RAILER is distributed through the RAILER Support Center at the University of Illinois. RAILER GIS requires that ESRI's ArcView GIS Version 3.2a be installed on the computer.

### OBJECTIVE

To provide installations:

- Assurance that the mission portion dependent on track can be met,
- Knowledge of track inventory and condition,
- Improved railroad track condition and performance, though knowledgeable M&R decision making,
- Reduced backlogs of maintenance and repair (BMAR),
- A basis for developing and utilizing indefinite delivery and job order contracting (JOC) contracts,
- A basis for allocating funds where they will provide the greatest return on the investment,
- A basis for and a means for rapidly developing Annual Work Plans which includes an identification of work needs and long-range budgets for the installation's railroad track network,
- An ability to rapidly develop projects for track work,
- An ability to prioritize both work needs and projects,
- An objective means for preparing and submitting the ISR report,
- A reduction in the cost of recurring track inspection and reporting, with the maximum return of information for a given inspection effort, and
- A consolidated and automated depository of track work history.

### BACKGROUND

The RAILER system was developed and is being advanced by the Engineering Development and Research Center, Construction Engineering Research Laboratory (ERDC-CERL) to provide a uniform system for managing railroad track. ERDC-CERL is responsible for developments and enhancements to RAILER and is designated as the RAILER Center of Technical Expertise. ERDC-CERL and Transportation Center of Expertise (CENWO-ED-TX) provide technical assistance with implementing using both in-house and contract methods, computer advice on hardware and software, computer support services, and training. CENWO-ED-TX serves as the RAILER product manager for the U.S. Army worldwide.

## CURRENT STATUS

Numerous Army, Navy, and civilian industrial railroads have implemented RAILER, including Fort Campbell, Fort Riley, Sierra Army Depot, Crane Naval Surface Warfare Center, and the Naval Weapons Center, Charleston, SC. Version 5.2 is available for immediate use. Included with this version is the supplemental RAILER RED program for use with handheld computers to speed inventory and inspection data entry and the RAILER GIS program for spatial data display.

## PLANS AND MILESTONES

Installation program funds, for RAILER implementation are available to MACOMs and installations using OMA funds. To use RAILER, an implementation process is required to build the inventory and inspection database and create the GIS coverage's. Afterwards, routine track inspection data are used to update the condition analysis and M&R planning process. Version 5.3 release (summer of FY02) adds a number of small features. A totally new RAILER RED is currently under development and testing. It will be released in conjunction with the RAILER 5.3 release.

## POINTS OF CONTACT

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## ROOFING ENGINEERED MANAGEMENT SYSTEM (ROOFER)

### DESCRIPTION

ROOFER Engineered Management System (EMS) is a practical decision-making tool to help identify cost-effective strategies for repair and replacement of low-slope membrane and asphalt shingle roofs. ROOFER provides a detailed inventory of the roof network, systematic inspections, assessment of conditions, and identification of SMR needs. MicroROOFER, a microcomputer application that runs in a Windows 95/98/2000 environment, provides data storage and analysis and generates management reports. ROOFER information can also be displayed spatially through the supplemental ROOFER GIS program. The inventory and inspection data from MicroROOFER can be directly imported into BUILDER, a building asset EMS. Once in BUILDER, the data can be used in the various analyses and IMPACT simulations.

ROOFER uses standard inspection procedures and numerical indexes for assessing condition. Distress data is collected during visual inspections; and for insulated membrane roofs, additional information is provided by nondestructive moisture surveys and gravimetric analyses of core cuts. From these data, MicroROOFER generates condition indexes for the major roof components and an overall roof condition index (RCI).

### OBJECTIVES

To provide installations:

- Inventory of roofing assets
- Development of detailed roof plan drawings
- Detection of roof defects and development of condition indexes
- Network analysis reports for prioritizing projects and justifying funding requirements in a 10-year budget plan
- Project analysis and determination of most cost-effective repair strategy
- Means for rapidly developing annual work plans
- Work request documentation for recommended actions
- Improved roof condition and performance through knowledgeable M&R decision-making
- A basis for developing and utilizing indefinite delivery and job order contracting (JOC) contracts
- Reduced backlogs of maintenance and repair (BMAR)

### BACKGROUND

ROOFER was developed by Engineer Research and Development Center (ERDC), with technical assistance provided by CRREL, Navy, Air Force, and industry experts to provide a cost effective program for managing low-slope membranes and asphalt shingle roofs. ERDC-CERL is responsible for developments and enhancements to ROOFER. The Installation Support Center of Expertise (ISCX) at the US Army Engineering and Support Center can provide military users with implementation assistance through the use of established Indefinite Delivery Type Contracts (IDTC).

### CURRENT STATUS

Numerous DoD installations including Fort Riley, Fort Lee and the Defense Supply Center – Richmond,

have implemented the ROOFER program to help them manage their roofing assets. Non-military users include cities, universities, and consultants. MicroROOFER Version 2.0 is available for immediate use.

## PLANS AND MILESTONES

Installations fund ROOFER implementation using OMA funds. To use ROOFER, an implementation process is required to build the inventory and inspection database. Afterwards, regularly scheduled re-inspections are conducted every 3-5 years to update the condition analysis and SRM planning process.

## POINTS OF CONTACT

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## WATER PIPER ENGINEERED MANAGEMENT SYSTEM (WPIPER)

### DESCRIPTION

Deterioration of underground water distribution systems, particularly those composed of unlined metallic pipe, is a serious and costly problem on military installations. Modern construction techniques, such as lining metallic pipes with cement mortar or plastic, have greatly reduced the problem; however, many of miles of unlined pipe still exist. One of the most serious deterioration processes, which occur in unlined pipe, is the loss of carrying capacity. Pipe corrosion, leading to the formation of tubercles, or calcium carbonate scale build-up on the pipe's interior surfaces cause diminished carrying capacity, possibly to the degree that the system fails to meet fire flow and daily demand requirements. WPIPER assists DPW's in making cost-effective maintenance and repair decisions. The system includes a pipe network inventory, a hydraulic model, data analysis reports, and a Hazen-Williams C-factor prediction model. Using the C-factor model in conjunction with the hydraulic model, managers can determine when the piping system, or a certain section of it, will no longer meet fire flow and/or daily demand requirements.

### OBJECTIVE

The objective of the WPIPER system is to provide installations with:

- Cost avoidance with timely and appropriate project selection for potable water distribution systems
- Reduced effort to determine which projects are needed most
- Improved condition of the water distribution system and user satisfaction
- Reduced backlog of maintenance and repair (BMAR)
- A permanent, organized, easily accessible repository for piping system information
- An objective method for pipe condition rating and assessment
- A basis for allocating available maintenance funds in an optimal manner

### BACKGROUND

The Construction Engineering Research Laboratory (CERL), Champaign, IL, to provide a uniform system for managing water distribution systems, developed the WPIPER system. It includes the Water Distribution System Analysis and Optimization (WADISO) program, developed by the U.S. Army Waterways Experiment Station (WES), for hydraulic modeling.

### SYSTEMS INTERFACE

WPIPER is a DOS-based program. It was originally designed to run on an IBM-XT, AT, or compatible system with 640K of RAM and a hard disk drive, and DOS 3.1 or higher. Most of today's users will run the program in a DOS window under Windows 3.1, 95, 98, or 2000.

### CURRENT STATUS

WPIPER is currently ready for implementation throughout the Army. The program and user manual may be downloaded from: <http://www.cecer.army.mil/usmt/wpiper/wpiper.htm>.

## POINTS OF CONTACT

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## ENVIRONMENTAL COMPLIANCE ASSESSMENT SYSTEM (ECAS)

### DESCRIPTION

The ECAS automated information system (AIS) is a software application developed through cooperation between the U.S. Army Environmental Center (USAEC) and the TIM Regional Office. The ECAS application is designed to support the assessment data collection process of the ECAS program. The entire ECAS process will not be automated through this version of the application.

An outside team of assessors conducts an external environmental assessment usually in three-year cycles. The external assessment process may be divided into five distinct phases:

- Update Library – During this phase, the regulatory protocols library and other standard lookup data is updated.
- Pre-assessment – During this phase, roles are assigned and the assessors prepare for the visit.
- Site Assessment – During this phase, the assessors identify findings at the facilities and brief installation personnel, and provide a Draft Findings Report (DFR).
- Review Assessment – During this phase, various stakeholders comment on the assessment. This phase concludes with the completion of the Environmental Compliance Assessment Report (ECAR) and the draft Installation Corrective Action Plan (ICAP).
- Implementation – During this phase, the installation takes ownership of the external draft ICAP and implements recommended or corrective actions they deem necessary to meet the regulatory requirements.

### OBJECTIVE

Compliance with environmental laws and regulations is an important issue for Army installations. Installation commanders need a program that will help them achieve, maintain, and monitor compliance with these laws. To address the increasingly complex world of environmental compliance, Headquarters, Department of the Army (HQDA) established the Environmental Compliance Assessment System (ECAS). This program, which was developed by the U.S. Army Environmental Center (USAEC) under the guidance of HQDA, provides installation commanders with a proactive approach to environmental compliance.

The ECAS automated information system (AIS) is a software application developed from input of the ECAS Software Users Workgroup (SUW) and approved by the ECAS Configuration Control Management Board (CCMB). The ECAS application is designed to support the assessment data collection process of the ECAS program

### SYSTEM INTERFACE

None

### CURRENT STATUS

The web-based ECAS system is under development with a field planned for early FY03. This product is intended to replace the current DOS based collection system with an improved web-based system.

## PLANS AND MILESTONES

Implement ECAS version 1 in early FY03

## POINT OF CONTACT

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ECAS information is available on the web at <http://aec.army.mil/usaec/compliance/ecas00.html>.

## **ENVIRONMENTAL PROGRAM REQUIREMENTS (EPR)**

### **ARMY ENVIRONMENTAL DATABASE (AEDB)**

#### **DESCRIPTION**

The Army's Environmental Program Requirements (EPR) system provides the primary means for identifying and documenting current and out year environmental requirements and resource needs to execute the Army's environmental program. The requirements are tracked from the time they are identified until completion or discontinuation of the project. It also retains an historical record of environmental quality projects identified in the EPR database over time. This system has evolved into the primary mechanism by which the Army supports the Programming, Planning, Budgeting, and Execution System (PPBES) for its environmental programs. Data submissions are semi-annual (Spring and Fall) but are mandatory for fall.

#### **OBJECTIVE**

To provide an automated mechanism for the collection of environmental requirements, review data submissions based on established quality assurance/quality control procedures and to maintain data in a central database.

#### **SYSTEM INTERFACE**

Data Source includes:

- EPRWeb utilizes a centralized database to collect environmental project data
- User interface that allows the entry of environmental requirements.
- Data is migrated into the ISR II and EQR to minimize redundant data entry.

#### **CURRENT STATUS**

EPRWeb is currently in use by the active Army, both CONUS and OCONUS.

#### **PLANS AND MILESTONES**

Incorporation of HQ validation data into EPRWeb and a data review module (Spring 03).  
EPRWeb software rewrite in FY04.

#### **POINTS OF CONTACT**

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## ENVIRONMENTAL QUALITY REPORT (EQR)

### DESCRIPTION

The EQR automated information system (AIS) is a Web application that serves as a primary source of information for conveying the Army's environmental status to the Senior Army Leadership, DoD, and Congress. Its primary focus is to track Army compliance with environmental laws for multi-media reporting and management areas through Inspections, Enforcement Actions (ENFs), and Permits, and other program parameters on a quarterly basis. Primary reports for this data are the Quarterly Army Performance Review (to SECARMY), and the semi-annual DoD Env Quality IPR (to DUSD(ES)), the fall IPR being the Army's input to the DoD Env Quality Report to Congress (RCS-1997). In addition to the quarterly reports, the EQR data calls in the Fall and Spring also include requirements for additional data required by the semi-annual DoD IPRs and other reports that HQDA submits for archeological resources, pest management measures of merit, reforestation, and threatened and endangered species.

### OBJECTIVE

The EQR provides a consistent user interface, with online guidance, for the collection, review, and retrieval of data in the program areas that include:

- Enforcement Actions
- Inspections
- Compliance Permits
- Wastewater Treatment Systems
- Waste Generation and Disposal
- Cultural Resources Plans, Inventories, and Surveys
- Natural Resources Plans, Inventories, and Surveys
- Threatened and Endangered Species
- Pest Management Measures of Merit.

SYSTEM INTERFACE: None.

### CURRENT STATUS

The web-based EQR system, now version 2.6, was first fielded for use in early FY98. The Army Compliance Tracking Systems, a predecessor DOS-based application, had been in use since FY92.

### PLANS AND MILESTONES

- Version 2.7 is planned for release in Jul 02.
- A major redesign is planned for FY03 to closely integrate the EQR with other environmental data systems in the Army Environmental Data Base (AEDB).

### POINTS OF CONTACT

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Additional EQR information is available on the web at  
<http://aec.army.mil/usaec/reporting/systems00.html>.

## ENVIRONMENTAL RESTORATION INFORMATION SYSTEM (ERIS)

### DESCRIPTION

The Environmental Restoration Information System (ERIS) is web-based database system for the storage of Army environmental restoration field data. It serves as a central repository for Army installation chemical, geological, and geographical and remedial action data. The ERIS contains converted data from the Installation Restoration Data Management Information System (IRDMIS), a DoD system for environmental sampling data, which is no longer in use. The ERIS uses web-based technology to allow easy and rapid data entry and retrieval by remedial project managers, engineers, chemists, geologists, geographers, and laboratories, and provides access to the latest analytical tools for Army users.

### OBJECTIVE

The ERIS provides a central information system of installation site-level data that may be used to support remedial project managers and other users during the remedial action decision-making process. The ERIS allows users to perform data analysis using tools such as modeling and an incorporated web-based Geographical Information System (GIS). In addition, the ERIS will help fulfill the Army's requirement under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)/Superfund Amendments and Reauthorization Act of 1986 (SARA) to retain environmental data for 50 years.

### SYSTEMS INTERFACE

- Integrates with commercial software, such as Xmarc, GIS and Microsoft Office Products
- Allows entry of chemical data through Laboratory Information Management System (LIMS) interface

### CURRENT STATUS

- ERIS Version 1.0 became operational in November 2001.
- ERIS is Internet accessible with user id and password.

### PLANS AND MILESTONES

- Develop enhancements needed requested by users: batch upload spreadsheets, files in the Help Section, Geology and Geography user interfaces.
- Add an electronic copy of an updated Data Dictionary to the application.
- Create hotlinks from the application to the ERIS Web page and the ERIS DENIX Work Area.
- Increase the quantity and quality of canned reports to accommodate users' preferences.
- Enhance existing GIS info and capabilities.

### POINTS OF CONTACT

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ERIS information is available in the ERIS Web page located at:

<http://aec.army.mil/usaec/reporting/eris00.html>



## **EXECUTIVE INFORMATION SYSTEM-HEADQUARTERS (HQEIS)**

### **DESCRIPTION**

Headquarters Executive Information Systems (HQEIS) is a user-friendly method for Headquarters Department of Army (HQDA), MACOMs and installations to view management information from the Integrated Facilities System (IFS) and other existing databases. HQEIS was designed to allow users easy access to Army facility data without knowledge of Structured Query Language (SQL) or specialized computer skills. HQEIS is a multidimensional database that provides graphical and tabular displays for multiple levels and Fiscal Years (FYs). These displays allow OSD, HQDA, MACOMs and installations a means of viewing and analyzing Army Real Property Inventory, Service Based costs, leases, Facility Reduction Program (FRP), trends over time, condition of facilities (HQISR), McKinney Act, etc.

### **OBJECTIVE**

To develop a system that provides consistent and accurate facility management information to foster improved decisions in planning, programming and carrying out the Army's mission. The HQEIS significantly improves the process of tracking cost and mission execution at all management levels. HQEIS provides users at all levels a user-friendly interface to existing data sources.

### **BACKGROUND**

Prior to development of HQEIS there was no one vehicle to integrate and view data from existing databases, such as IFS, Army Stationing Installation Plan (ASIP), Headquarters Installation Status Report (HQISR), Headquarters Real Property and Analysis System (HQRPLANS), Lease Management Database (LMD) and HOMES, among others. Facility Managers at all levels had to rely on personnel with knowledge of Structured Query Language (SQL) to extract data for management decisions. This process was time consuming, involving collecting data from separate systems and manually integrating it into presentation software. The HQEIS displays, organizes and analyzes facility data in a way that can be used for planning, decision-making, problem solving, and preparing briefings and reports.

### **CURRENT STATUS**

The HQEIS has been available for users to access since October 1995 and receives ongoing enhancements. Access to HQEIS is now available on the web at <http://eis.belvoir.army.mil>. A username/password must be requested from [hqeis@hqda.army.mil](mailto:hqeis@hqda.army.mil) for access to the system.

### **PLANS AND MILESTONES**

- Add Region drilldown capability (March 2002)
- Add capability to pull all data by Component (Active, USA Reserves, National Guard) Location (United States, Overseas, etc.)
- Include/exclude BRAC closure
- Ability to sum data by new SRM codes
- Investigate other software products for EIS display
- GIS Redesign - Display RPI and other data sources using a new GIS tool

## POINTS OF CONTACT

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HQEIS information is available on the web at <http://ifs.sdcl.lee.army.mil/eis/hq-macom/hq-mac.htm>.

## **EXECUTIVE INFORMATION SYSTEM - INSTALLATION (IEIS)**

### **DESCRIPTION**

The Installation Executive Information System (IEIS) is the DPWs tool for accessing existing facilities management, cost, and real property data. It allows users to easily navigate through massive amounts of data quickly in order to prepare briefings and reports necessary for planning, decision-making and problem solving. Through graphical and tabular displays, IEIS provides much of the data required for the DPWs Review and Analysis Program, Commercial Activities Studies, and facilitates upward reporting requirements such as Service Based Costing. IEIS is an extremely dynamic and flexible system and can be customized to meet local DPW management data requirements. Data from each installation is extracted on a monthly basis and stored in a centralized data warehouse. Users from Army Installations throughout the world can then access the system via their Internet browser or through a thin-client software download. This system was developed using a model of DPW work management functions. It is a part of the “family” of EISs currently used at the DOD, HQDA and MACOM level.

### **OBJECTIVE**

To develop a system that provides consistent and accurate facility management information to foster improved decisions in planning, programming and carrying out the DPWs mission. The IEIS significantly improves the process of tracking cost and mission execution at all management levels. By integrating Installation Management information from a variety of sources and databases into a single data warehouse, managers at all levels have a more comprehensive look at the information they need to manage their day-to-day operation. IEIS provides users at all levels one system that has a user-friendly interface to existing data sources. IEIS supports the Army's Infrastructure Decision Architecture.

### **BACKGROUND**

Prior to development of IEIS there was no one vehicle to integrate and view data from existing databases, such as IFS, Housing Management System (HOMES), Installation Status Report (ISR), and others. Facility Managers at all levels had to rely on personnel with knowledge of Structured Query Language (SQL) to extract data from IFS for management decisions. This process was time consuming, involved collecting data from separate systems and manually integrating it into presentation software. The IEIS displays, organizes and analyzes facility management data in a way that can be used for planning, decision-making, problem solving, and preparing briefings and reports. IEIS was placed into production in March of 1998. Initially the application was not centrally funded and therefore required a \$3500 subscription fee from installations wishing to use the tool. IEIS is now centrally funded as part of the IFS program and is available free of charge to all installations running IFS.

### **CURRENT STATUS**

IEIS is a very dynamic system that is continually improved upon. The application resides on a Windows Terminal Server (Citrix Metaframe) in Alexandria, Virginia. The Database server also resides at the same location running Oracle 8iEE. Users access the application either via their web browser or by downloading the Citrix thin client to their local PC. The application was developed using The Pilot Decision Support Suite tools, Crystal Report writer, and Visual Basic. The Windows Terminal Server uses SQL\*Net to attach to the Oracle database and display data on standard screen displays. Access to the system requires a username and password. Additional layers of security are also built in to the application. IEIS is at use at most installations running IFS.

## PLANS AND MILESTONES

New “generic” interface that will allow data from all CMMSs in use (not just IFS). Minimum installation reporting requirements for IEIS have been defined. Data can be accepted and integrated from a variety of systems and data formats. Updated live queries capabilities. Users with access to IFS will have over 50 queries to choose from, with variable options available for selected date ranges, shops, customers, facilities and more. Managers that are not familiar with the complexity of query writing can execute customized queries by simply pointing and clicking. Upgrade USAREUR Windows Terminal server, database and Pilot Decision Support Suite. Performance testing will also be conducted. Integrate graphical data with existing tabular data. The Army’s Geographic Information System Repository (GIS-R) will be the basis for the integration.

## POINTS OF CONTACT

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IEIS information is available at: <http://ifs.sdcl.lee.army.mil/eis/eis.htm>

## **FACILITY PLANNING SYSTEM (FPS)**

### **DESCRIPTION**

The FPS provides military planners with the means to compute facility space allowances for 31 category codes for TOE units and 44 category codes for TDA organizations. These category codes represent the most frequently occurring unit-driven facilities. The FPS also provides the means to compute allowances for installation warehouses (5 category codes). Computations are based upon the Table of Organization and Equipment (TOE) or the Table of Distribution and Allowances (TDA) for each organization examined. Facility allowances are calculated in accordance with current Army planning criteria as provided in the Army Criteria Tracking System (ACTS). In addition to computing facility space allowances, FPS provides military planners with other capabilities, e.g., to obtain personnel and equipment lists for an organization, to search personnel or equipment lists for Military Occupational Specialty (MOS), Line Item Numbers (LIN), keywords, or to search TOE/TDA titles for keywords.

### **OBJECTIVE**

To provide a quick and accurate calculation of major facilities needed to support mission requirements. It also serves as a single source of personnel and equipment information for most TOE units and TDA organizations. It is a useful tool for installation planners as well as planners at MACOM and DA levels.

### **SYSTEMS INTERFACE**

Data Sources include:

- OTOE data from TRADOC Documentation System (TDS) including all DA-approved Basis of Issue Plans (BOIP)
- TDA documents from The Army Automated Document System (TAADS)
- Facility criteria from ACTS
- Army Training Resource Requirements System (ATRRS) training loads from TRADOC

FPS provides feeder data to:

- RPLANS - Facility allowance calculations

### **CURRENT STATUS**

- Available through the INTERNET as a stand-alone system
- Accessible by all levels of the Army with valid password
- Updated annually in October
- Completely menu driven with no hard copy documentation required
- Management and oversight of the FPS application, its content, and its functionality are under the Plans and Operations Division, ACSIM

### **PLANS AND MILESTONES**

- The system is currently operational

## POINTS OF CONTACT

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Technical Hotline: [fps@rkeng.com](mailto:fps@rkeng.com)

Request access and download client (thin) software at <http://www.rkeng.com/downloads.asp>

## **FairShare BASE SUPPORT RESOURCE AND FUNDING MODEL**

### **DESCRIPTION**

The FairShare funding model currently provides the Army with a comprehensive, interactive, Directorate of Public Works requirements and funds distribution generator. The model is web-based and encompasses all Army installations and MACOMS. It is available to all levels of Army management as: a resource tool for Program Objective Memorandum (POM) build requirements, a fund distribution tool that allows direct installation funding, a management tool that allows users to see the effects of their various investments in terms of changes to Installation Status Reports (ISR Part 1) quality condition codes, and an investment optimization tool that ensures that decision makers obtain the optimal investment in facilities based upon their own goals and objectives. In the future (FY03) the model will be expanded to encompass all BASOPS accounts and provide a truly comprehensive Base Support funding and resource model. FairShare is not an accounting tool, but a “front-end” program for Army accounting systems.

### **OBJECTIVE**

To provide installation management at HQDA, Installation Management Activity (IMA), IMA Regional Offices, Major Army Commands (MACOMS), and installations a connected, interactive, tools that unifies installation requirements and provides for equitable funds distribution throughout the Army. FairShare also allows fiscal decision makers to analyze their decisions in terms of effects to infrastructures and optimization of investment.

### **BACKGROUND**

US Army Forces Command began using this model over ten years ago in an effort to eliminate the perception that funding between installations was inequitable. FairShare has proven extraordinarily effective as it matured over the years and is currently used by FORSCOM, TRADOC, AMC, EUSA, MEDCOM, USAREUR, MTMC, USASMDC, USMA, USARPAC, USARC, and MDW.

### **IMPLEMENTATION ASSISTANCE**

R&K Engineering provides developmental and hosting services for FairShare. The FairShare web site is at: [www.rkeng.com](http://www.rkeng.com). R&K also provides free periodic training (other than TDY costs) on FairShare.

### **POINTS OF CONTACT**

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## **FIRE INFORMATION RESOURCE MANAGEMENT SYSTEM (FIRMS)**

### **CURRENT STATUS**

In March 2001 the FIRMS Fire and Emergency Services Automation Task Force (F&ES ATF) compared Commercial Off The Shelf (COTS) with GOTS (Government Off The Shelf)/FIRMS as required by AR 25-1 (15 Feb 00). COTS software has come a long way since FIRMS was last compared with COTS over four years ago at CERL and COTS software (such as Firehouse or Fire Programs) now meets most Army fire department requirements. Although the F&ES ATF recommended further development of FIRMS, OACSIM recommended discontinuation of FIRMS and use of COTS, because FIRMS software was only a single-user system, not maintainable, lacked documentation, had little configuration management, and did not use current technology. Finally, information technology experts advocate buying commercially available software to avoid the high costs and risks in customizing your own software to meet current business practices rather than improving your business practices to fit new COTS software.

### **POINT OF CONTACT**

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## **GEOGRAPHIC INFORMATION SYSTEM - REPOSITORY (GIS-R)**

### **DESCRIPTION**

The Geographic Information System Repository (GIS-R) is a centrally managed repository of spatial data for Installation Managers at all levels. GIS-R integrates existing spatial and non-spatial data and serves it to users via an application that is accessible to all. HQDA has established a program that will organize and store for retrieval, certain geographic information in and around Army installations. In turn, this spatial data will enhance the information delivery of a variety of HQ-level decision support systems. Installation prepared geographic data will be integrated with geographic data from a variety of sources (DA, DOD, Other Federal and Commercial) for more comprehensive analysis across Army Installations.

### **OBJECTIVE**

The goal of GISR is to standardize the minimum required data set across installations and serve these data sets to all users on a need to know basis via web based and web-enabled applications. GISR will also aid in the sharing of data on installations themselves.

Each piece of information currently maintained in the various HQDA data base systems repository has the ability to be related geographically. The geographic data can also be combined with attribute information about that same feature. This is a very powerful tool that permits the combination and analysis of information spatially ... thereby presenting the impact of actions visually.

GISR will also provide the capability to quickly compare information at various locations and to assist decision makers in visualizing the results of actions they may be contemplating ... such as the impact of additional training cycles on environmentally sensitive training lands.

**BACKGROUND** Historically, the Army has faced significant barriers to integrating spatial data into traditional information systems. Invariably, technology solutions for handling spatial geometry in the context of a general-purpose database management system (DBMS) have been too complex, too costly, or too proprietary. Over the past 30 years, government agencies, including Army Installations, have generated and stockpiled thousands of terabytes of spatial data—all managed using very specialized GIS or CADD database systems. In many cases, much of this spatial data is “locked up” in these proprietary systems and is generally not available to other users since these GIS and CADD systems are not interoperable across applications that support essential decision processes, especially at Department of the Army and MACOM headquarters.

This situation is changing. A number of technology and product advancements have converged to rapidly accelerate the union of spatial and related enterprise data in decision support applications. In the context of asset management, these new advancements can become a logical extension to a suite of Army installation and facilities data that is already being stored using Oracle DBMS technology.

Several vendors (Oracle, ESRI) have introduced a new generation of spatial data storage and manipulation capabilities that break down technology integration barriers between spatial and other enterprise data. This advanced product allows users to create solutions that incorporate the best from both worlds—spatial and non-spatial

With this important technology advance, it is now possible to develop targeted end-user applications that leverage the Army’s investment by maximizing the benefits of integrating spatial data into enterprise-level decision support.

## CURRENT STATUS

GISR is in prototype. Five installations were selected for this prototype (Fort Benning, Fort Bragg, Camp Swift, Fort Meade, and Darmstadt, GE). Detailed information is available for these installations, to include the basic themes outlined below. In addition, this data has been integrated with commercially available data sets to show the complete inside and outside the installation boundary look. In addition, world and vicinity layers have been created that allow us to do analysis with visual results of all Army installations (point data). Maps are linked to the HQEIS (Army Inventory) database. Additional installation will be added beginning in Jun 02.

GIS-R is being developed using the ESRI suite of products. An ArcIMS application is being developed for the casual user. An ArcView application is served via Windows Terminal Server to the “power users”. This allows users to enjoy the full power of ArcGIS without having to install heavy client software on local machines. ARCSDE is used to manage the data in order to have seamless integration as users zoom from a world view to a country, region, vicinity and finally inside the installation boundary.

The election of the initial set of data layers requested for GIS-R is underway. Initial set of data must contain the information in the format as prescribed in the ACSIM GIS Implementation Guidance. Basic themes include:

- Installation digital orthophoto, aerial, satellite maps (base imagery)
- Installation boundary layers
- Infrastructure footprints (buildings, roads, utilities)
- ITAM GIS (range utilization, training areas)
- Environmental Overlays (wetlands, noise, trafficability)

## PLANS AND MILESTONES

- Complete Prototype to include standard World, US, Vicinity, and Installation view (for five prototype installations)
- Work with the ARSIC in establishing the GISR Implementation Guidance. Issue guidance with minimum required themes and layers by end of FY 02.
- Provide on-going support and assistance to installations in converting existing maps to Spatial Data Standards.
- Collect data for additional installations

## POINTS OF CONTACT

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GISR information is available at: <http://gisr.belvoir.army.mil>

## HAZARDOUS SUBSTANCE MANAGEMENT SYSTEM (HSMS)

### DESCRIPTION

HSMS is the DoD automated hazardous substance tracking system designed to provide "cradle-to-grave" tracking of the hazardous materials (HM) stored and used at an installation, and also provide a tracking capability for the chemical constituents of those materials. HSMS is the hardware and software component of the Hazardous Material Management Program (HMMP). The system provides full functionality and legal reporting requirements to satisfy Executive Order (EO) 12856, "Federal Compliance with Emergency Planning and Community Right-to-Know Laws and Prevention Requirements." In addition, HSMS maintains considerable data within its database that may be useful to an installation in meeting additional reporting requirements that may be mandated by Federal, State, or local regulatory agencies including Tier I, Tier II and Form R reports. HSMS tracks hazardous substance usage and hazardous waste generated through the use of a set of process algorithms, which calculate chemical release based on the way the material is utilized (process).

The system tracks hazardous substance that is requisitioned/ordered, received, stored, issued, used, recycled or spilled and is designed to run on Windows 95, Windows 98, Windows NT (through SP6A), Windows ME, or Windows 2000 client computer. The database engine is Oracle 7.3.4, Oracle 8.05, or Oracle 8i. The database server can operate under Windows NT or a Unix platform that supports the named versions of Oracle, provided that network connectivity to Windows clients can be attained.

### OBJECTIVE

HSMS is a Department of Defense (DoD) standardized automated hazardous substance tracking system and is part of the Environmental Information Technology Management (EITM) program. HSMS is used to enable the operations of the Hazardous Material Management Program (HMMP) at the installation level and provides a better way to manage Hazardous Materials (HM) and Hazardous Waste (HW) through centralized management using Business Practices and an Automated Tool (HSMS Software).

### SYSTEMS INTERFACE (indicate if not applicable)

Interfaces exist for HSMS to two of the Army's logistics systems through the Logistics Interface Utility (LIU), the Hazardous Materials Information System (HMIS) maintained by the Defense Logistics Information Service, and to the DRMS Automated Information System (DAISY).

The LIU allows for batch upload of information from the Standard Army Retail Supply System (SARSS) and the Integrated Facility System (IFS) for seven logistics transactions. This interface is intended to minimize the number of keystrokes necessary to update HSMS with these transactions. This interface was built against HSMS 2.3 and has not been updated for HSMS 2.4.

The HMIS interface allows the HSMS user to query the online HMIS system for Material Safety Data Sheet (MSDS) records. These records can be retrieved from the online system and saved in HSMS for use by the application. These records may include specific ingredient and large amounts of text-based information if it is available in HMIS. The HMIS system is undergoing a redesign scheduled for deployment in April 2002. This redesigned system will be designated as HMIRS (Hazardous Materials Information Resource System). When HMIRS is deployed, the current HMIS interface will no longer function. A redesign of that portion of HSMS will be required at that time. HMIRS will eliminate many of the text-based fields in the current HMIS interface but will allow for downloading of the electronic images of the manufacturer's MSDS into HSMS. A provision for storage and retrieval of those images

already exists in HSMS. The format of the available MSDS images from the HMIRS system has not been published.

The DAISY interface allows the HSMS user to transmit hazardous waste container information associated with the electronic submission of the standard DD1348-1 or DD1348-1A form to their supporting DRMO. This information is received and processed by DRMS and the follow-up Delivery Order and Manifest information may be downloaded into HSMS for tracking purposes.

## CURRENT STATUS

HSMS 2.4 is the latest version of this migration system for which the Environmental Information Management (EIM) system was the target system. HSMS 2.4 was released to the services on 28 September 2001. Development of HSMS began in 1991 with deployment of HSMS 1.0 starting in July of 1995.

This application implements a large number of required and optional functions supporting a wide variety of business practices providing a flexible & scalable cradle-to-grave hazardous chemical tracking system. It consists of a single executable file with one custom Dynamic Link Library (.dll) file. Reports from within the application utilize Crystal Reports 7. Ad hoc reports generated at the end-user level can use any report generator that will allow a connection to the Oracle database. Most service component sites seem to be using Crystal Reports version 7 or higher for ad hoc reporting which allows for the sharing of reports between sites where appropriate.

HSMS is currently installed at approximately 170 federal facilities within the Department of Defense, Department of Transportation, and the Department of Treasury.

## PLANS AND MILESTONES

- 3<sup>rd</sup> Quarter FY02 – Acceptance Test of HSMS 2.4.1
- 4<sup>th</sup> Quarter FY02 – Release of HSMS 2.4.1
- Field to the rest of the ARMY FY04 – FY09
- Sustainment of the HSMS software

Further functionality for HSMS might also include additional regulatory reports and data points (such as those for Title V reporting) rather than providing interfaces to other systems. Including some of these requirements in the HSMS application may result in a lower expenditure of programming resources.

## POINTS OF CONTACT

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## **HOUSING OPERATIONS MANAGEMENT SYSTEM (HOMES)**

### **DESCRIPTION**

HOMES is a client/server distributed processing system with a Graphical User Interface (GUI). The operational concept for this interactive system is for all functions required to perform housing customer service to coexist on a common hardware/software platform and share a common database via a Local Area Network (LAN). This concept produced HOMES functions that fully support on-post housing, off-post housing, inventory management, and unaccompanied personnel housing (UPH). HOMES interfaces with the USAREUR Community Automation System (UCAS) to share and exchange service member personnel information.

Reports are produced via Crystal Reports integrated with the Visual Basic source code. Additional reports and ad-hoc queries are produced via Intelligent Query (IQ).

Functional areas supported include:

On-Post Housing - This function automates on-post, government controlled family housing to include but is not limited to functions of: assignment, terminations, offers, waiting and TLA.

Off-Post Housing - This function assists the housing referral services program in finding soldiers and their families' suitable and economically nondiscriminatory housing within reasonable commuting distance to the duty station. This provides a record keeping system for off post housing assignments and terminations.

Furnishings Management - This function aids Furnishings Management Officers in controlling and managing equipment and furniture inventory. It permits planning, programming, and budgeting requirements for family and unaccompanied personnel housing furniture and major household appliances.

Unaccompanied Personnel Housing - This function automates management of unaccompanied personnel housing and can include barracks. It enables housing managers and unit personnel to manage troop facilities.

### **OBJECTIVE**

HOMES supports installation-level housing operations and management throughout the Army and provides reports and feeder data for housing management at all levels from the installation through HQDA.

### **BACKGROUND**

HOMES is a Standard Army Management Information System (STAMIS), with 103 operational sites worldwide. It was developed to provide a fully interactive automated system to support the day-to-day functions of the installation/community and MACOM Housing Management Offices. It automatically accomplishes the record keeping functions of housing and it makes information available immediately to both management and staff personnel who require the data to accomplish their mission. HOMES supports the one-stop, one-chair concept for housing customer service. It replicates data nightly from installation HOMES servers to the Army Housing Executive Information System (HEXIS).

## SYSTEMS INTERFACE

Currently, HOMES interfaces with UCAS. It is expected that future releases of HOMES will interface with IFS for facilities data and with DEERS for personnel data.

## CURRENT STATUS

Currently, there are approximately 1,500 users worldwide at 103 locations.

## PLANS AND MILESTONES

HOMES Version 12.02 will be deployed during the 4<sup>th</sup> quarter of FY 2002. This will include the reinstatement of DD Forms 1410 and 1411 for local management use. The next iteration of HOMES will be development and deployment of a web-based system to comply with Army IT architecture requirements.

## POINTS OF CONTACT

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## **INSTALLATION MANAGEMENT GATEWAY ENTERPRISE (IMaGE)**

### **DESCRIPTION**

IMaGE is the ACSIM's Enterprise Integration Gateway, a web-based system that integrates data from several key installation management systems (i.e. ASIP, HQEIS, HQRPLANS, and HQISR). Its features include standard and custom report building tools; direct launching of installation management applications, document sharing and searching functions, customizable and personalizable web links, and e-mail integration.

### **OBJECTIVES**

IMaGE's objective is to provide users with a unified, dynamically integrated and maintained view of the installation management and BASOPS information that is distributed throughout the ACSIM, with the goal of increased productivity, improved systems integration, increased collaboration and universal access to enterprise resources.

### **BACKGROUND**

IMaGE's development began in the fall of 2000 when the ACSIM leadership identified the need for an application to integrate its key installation management systems and retrieve summary information from them. Among the stated requirements were the needs for effective querying of summary-level data, quick retrieval of standardized reports, and direct access to the existing expert systems. These objectives had previously been out of reach due to the lack of an effective capability to query from multiple sources of both structured and unstructured data. IMaGE's initial design centered on the ACSIM Plans and Operations Division and HQDA-level data from its four primary systems (ASIP, HQEIS, HQRPLANS, and HQISR), development continues with the aim of integrating all ACSIM Systems.

### **SYSTEMS INTERFACE**

IMaGE is a web-based application that is hosted on and accessible through the military (.mil) domain, with database-level connections to the ASIP, HQEIS, HQRPLANS, and HQISR. VISTA Information Technologies, Inc. of Herndon, Virginia was contracted to develop the system.

### **CURRENT STATUS**

In the fall of 2001 VISTA completed development of IMaGE and began the testing and installation phase. The system is expected to be fully operational in 2002.

### **PLANS AND MILESTONES**

Once IMaGE is fully operational, the ACSIM plans to expand its scope to incorporate data from other installation management systems and to add the remaining ACSIM divisions to its user base. Long-range plans may include expansion to the MACOM/Region and Installation levels.

### **POINTS OF CONTACT**

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## INSTALLATION STATUS REPORT (ISR)

### DESCRIPTION

The Installation Status Report (ISR) is a decision support system intended to improve the management of limited resources on installations and provide the capability to program resource requirements. Its fundamental purpose is to provide a system to rate the readiness of Army installations to meet their BASOPS support requirements. ISR is the commander's annual report, developed, reviewed, and approved at installation-level and then forwarded to higher headquarters. Through ISR each installation's conditions and performance are assessed against Army-wide standards in three areas: Infrastructure, Environment, and Services. The ISR software allows for the data collection, storage, reporting and analysis of data. It is consolidated, reviewed and then approved at the Major Command-level (MACOM-level) and then is forwarded to Department of the Army (DA). At DA-level the data is reviewed, consolidated, and used in decision support.

### OBJECTIVE

ISR provides an analysis process to compare and contrast conditions on the installation as well as the Major Subordinate Command (MSC), MACOM, and Army-levels. It is a system to collect and process data against Army-wide standards that provides data to be used in management and decision support systems.

### BACKGROUND

DA developed ISR Infrastructure in 1994 based on earlier concept work by the Operations Research Center (ORCEN) at West Point, NY, at the request of the Assistant Secretary of the Army for Financial Management (ASA-FM). It was developed as a means to assess installation-level conditions and performance against standards to assist in management decision support systems. Service Based Costing (SBC) was developed as a separate system and is being integrated into ISR Services. Further information is available at <http://isr.pentagon.mil>.

### SYSTEMS INTERFACE

ISR draws data from:

- ISR1 – ISR Infrastructure
  - RPLANS – Quantity data
  - IFS – Inventory data
  - CEAC – Cost data
  - ASIP – Installation Population data
- ISR2 – ISR Environment
  - EPR – Funding and projects data
  - EQR – Compliance, conservation, and pollution prevention data
  - DSERTS/RCTCS – Cost to complete data
- ISR3 – ISR Services
  - CPAC – manpower/personnel action data
  - 218 data – manpower and funding data
  - HQEIS – real property data
  - ASIP – manpower authorization data



ISR provides data to:

- Command Viewer – All
- HQRPLANS – Facility requirements
- RPLANS – Facility requirements
- IFS – Real property changes

## CURRENT STATUS

ISR1 – for 2002 the data input application remains a PC-based application.

Viewing of data is via the Command Viewer.

ISR2 - for 2002 the data input application remains a PC-based application.

Viewing of current data is via the HQISR. Viewing of historical data is via the Command Viewer.

ISR3 – a web-based application.

Command Viewer – a web-based application.

## PLANS AND MILESTONES

ISR1 will be further developed as web-based technology permits.

ISR2 will be a web-based application by 2004.

## POINTS OF CONTACT

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## **INSTALLATION STATUS REPORT (ISR) COMMAND VIEWER**

### **DESCRIPTION**

The Installation Status Report (ISR) Command Viewer is a Web-based integrated executive information system that allows Army commanders at all levels to view, process, and evaluate ISR data for the current data collection cycle as well as view data from past years in the various components of ISR: Infrastructure, Environment, and Services/SBC. For 2002 data collection, the ISR Infrastructure and Environment data input applications remain PC-based applications. Additionally, for current year data processing, the Environment component will use the HQISR legacy application in 2002. By 2003, the Environment Data Input and current year data processing should be addressed via ISR Command Viewer.

### **OBJECTIVE**

The ISR Command Viewer provides a means for the commanders at all levels to view the data of the current data collection cycle as well as past years data to assist in assessment of programs and support requirements.

### **BACKGROUND**

The Command Viewer integrates the capabilities of two former systems, the Installation Command Viewer (ICV), used for viewing installation-level data and the HQISR, which was used to view data at echelons above installation.

### **SYSTEMS INTERFACE**

Command Viewer draws data from ISR Infrastructure, ISR Environment, and ISR Services. It can be used for current data (all except ISR Environment) and historical data (all).

### **CURRENT STATUS**

Command Viewer is fielded Army-wide and is available at <http://isr.pentagon.mil>

### **PLANS AND MILESTONES**

Command Viewer will be upgraded, as required, to meet system requirements and to support modifications to ISR1, ISR2, and ISR3.

### **POINTS OF CONTACT**

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## **INSTALLATION STATUS REPORT - ENVIRONMENT (ISR-II)**

### **DESCRIPTION**

ISR Environment is one component of a trilogy of Army Chief of Staff for Installation Management (ACSIM) data collection and reporting tools (the other components being Infrastructure and Services) that can measure and assess the readiness of Army installations. The information is collected annually based upon 19 media within the 5 pillars of Compliance, Conservation, Pollution Prevention, Restoration, and Foundation. The ISR Qualitative and Quantitative C-ratings are developed from a series of 401 qualitative and quantitative standards that each installation answers for every ISR media. Green, amber, red color ratings result for each standard. The color ratings from qualitative standards are rolled up into program performance, environmental condition, mission impact, and compliance areas under each media, and then further rolled up into a final qualitative C-rating (C-1 good through C-4 poor performance). Quantitative standard responses are rolled up to Quantitative C-rating based on an algorithm, which combines funding and non-funding standards. The overall media C-rating is the lower of the qualitative or quantitative C-ratings. Finally, commanders have the option to overwrite the C-rating and justify their change. Through various levels of rolling up the data this system provides a graphic tool to readily assess and rate installations, Base Support Battalions (BSB), Area Support Groups (ASG), Major Sub Commands (MSC), Major Commands (MACOM), and the Army (HQDA) as to their readiness and sustainability across the various media and pillars.

### **OBJECTIVE**

ISR Environment is a management tool for commanders and leaders at all levels from installation to HQDA that measures installation readiness as impacted by environmental conditions. It assesses macro-level conditions of the installation environmental program against Army and Department of Defense (DoD) standards derived from Army short-term and long-term objectives, DoD Measures of Merit (MOM), and other management indicators.

### **SYSTEMS INTERFACES**

The ISR Environment is a higher level reporting system in that it incorporates aspects of information collected from several other Army Environmental Information Systems including Environmental Program Requirement (EPR), Environmental Quality Report (EQR), and the Defense Site Environmental Restoration Tracking System/Restoration Cost to Complete System (DSERTS/RCTCS). Typically at the start of a data call in January of each year about 20% of the data can be auto-populated from these other systems, which avoids duplication of effort. The auto-populated data (mostly project funding data, number of Enforcement Actions (ENF), and other quantitative data) then merely needs to be validated and properly classified into the appropriate media by the installation Points of Contact (POC). At the conclusion of the data call in May, the data is given a quality assurance/ quality control (QC/QA) check and then made accessible through Command Viewer (a web-based ISR query and reporting tool) as well as through the Army Environmental Database (AEDB).

### **CURRENT STATUS**

The ISR Environment for 2003 is currently in the process of a major transition. The software is being converted from a PC-based system to an Internet application. This will allow users to directly enter their data online, as well as submit the data through the chain-of-command. The number of standards has been significantly reworked and reduced from 401 standards in 2002 to 152 standards for 2003. To the maximum extent possible, the new standards have been revised to allow for an assessment that is

measurable and outcome oriented. The tool can be used to improve the justification and prioritization of limited resources by providing a linkage between standards and funding requirements. The ISR Environment will no longer fulfill the requirement as an internal ECAS for installations. The new software is currently being coded.

## PLANS AND MILESTONES

Longer-term (FY03-05) plans are to develop and implement a Predictive Cost Model (PCM) for ISR Environment. The need for a PCM was identified by the Senior Environmental Leadership Council (SELC). It will facilitate a merger of the Army Installation Management – Headquarters Information (AIM-HI) system with the ISR.

## POINTS OF CONTACT

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## **INTEGRATED FACILITIES SYSTEM (IFS)**

### **DESCRIPTION**

The IFS is a real property management system providing direct support to over 150 Army, Army Reserve and DLA DPW organizations worldwide. It supports the business functions of real property inventory management and reporting, work request receipt and tracking, work/cost estimating, supply management, job cost accounting, contracted project development/management and credit card management.

Through an interface with HQEIS, the IFS real property inventory data supports numerous programming, stationing and information requirements at the HQDA and higher reporting levels. It is also the source for the Army Financial Statement.

The system is designated as a Standard Army Management Information System (STAMIS), having received Milestone III approval for deployment by the Army MAISARC in June, 1990. The ACSIM serves as the functional proponent, providing funding and regulatory guidance. The IFS Configuration Control Board (CCB), comprised of MACOM and DA Staff representatives, provides strategic direction for the system.

ACSIM and CECOM personnel located at Ft Lee, Virginia, maintain the system and provide both functional and technical customer assistance. Functional IFS courses are offered by the Huntsville Professional Development Support Center.

### **SYSTEMS INTERFACE**

The IFS contains formal interfaces with Army and Defense systems to include DAAS, DPAS, DJAS, SPS, STANFINS and SIFS. It also supports data links to ASIP, ISR, RPLANS, IEIS and a variety of Commercial Off The Shelf (COTS) applications. COTS products have also been integrated into the IFS family of system modules where practical. (Logistics Data Research's Supply 2000 and Win*Estimator*, Inc.'s Win*Est Pro*).

### **ARCHITECTURE**

The IFS uses a client-server architecture functioning across the installation's Local Area Network. Servers utilize the Unix (Sun SOLARIS) operating system and the ORACLE database management system, while client PCs are MS Windows based. Generally installations operate the system locally, although it is also centrally hosted for a number of smaller sites. IFS contains several web based applications that provide DPW customers direct access to record and track their maintenance requests. Users can generate their own queries and reports using the ORACLE SQL and Discoverer products.

### **FUTURE PLANS**

The IFS has been modified to operate in a web-enabled mode to comply with Army Knowledge On-Line (AKO) requirements. An initiative is underway to host the system at one or more central locations, requiring users to have only a PC with a web browser and Citrix plug-in. Interfaces between IFS and various contractor systems have been and will continue to be developed to facilitate data integration with Commercial-Off-The-Shelf (COTS) software used by DPW Commercial Activities and other Services contractors.

The Assistant Chief of Staff for Installation Management (ACSIM) continues to review COTS software as potential replacements for IFS components as appropriate.

#### POINT OF CONTACT

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## **JOB ORDER CONTRACTING (JOC)**

### **DESCRIPTION**

Job Order Contracting (JOC) is a firm fixed price, indefinite delivery, and indefinite quantity type contract used to execute sustainment, restoration, and modernization (SRM) projects at the installation. JOC is flexible and responsive and reduces engineering and procurement lead times. The contract includes a unit price book (UPB) that establishes a unit price to be paid for each of a multitude of construction line items. There are a number of commercial-off-the-shelf systems suitable for the UPB, as well as, the automated system that manages the pricing database.

### **OBJECTIVE**

Provide DPWs and other users a dynamic contracting technique that reduces engineering and procurement lead times and a choice of software for its execution.

### **BACKGROUND**

JOC was approved for Army-wide implementation by OASA (I&L) and OASA (RD&A) in May 1988. Initially Army installations were required to use the standard database called the JOC National, for production of their UPB. However, in 1998, the Assistant Chief of Staff for Installation Management, the JOC Army proponent, rescinded the policy. DPWs may now choose the UPB and software that's appropriate for their installation. For additional information on JOC, visit the JOC website through the ACSIM web page at [www.hqda.army.mil/acsimweb/fd/policy/facmgcur.htm](http://www.hqda.army.mil/acsimweb/fd/policy/facmgcur.htm)

### **SUMMARY**

The Army does not endorse any single product for use with JOC but offers the following estimating data bases and software as some of the commercial-off-the-shelf systems available for use with JOC:

- R.S. Means
- The Gordian Group
- US Cost, Inc.
- ProEst
- Progen
- Pulsar (Estimating Systems, Inc.)
- Timberline
- Success
- WinEst

### **POINT OF CONTACT**

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## **NATIONAL INVENTORY OF DAMS (NID)**

### **DESCRIPTION**

The National inventory of Dams (NID) is based on the Federal Emergency Management Agency (FEMA) requirements for reporting the status of the nations dams to Congress. NID is used for :

- Adding a National Inventory of Dams (NID) record, inspection record and maintenance record.
- Editing a NID record, inspection record and maintenance record.
- Printing SI & A sheets, Inspection and Maintenance sheets.
- Running the NID, Inspection and Maintenance reporting query.
- Reporting to the Federal Emergency Management Agency (FEMA) and Congress.

The U.S. Army Engineer Development and Research Center (ERDC), Waterways Experiment Station (WES), U.S. Army Corps of Engineers, and the Office of the Army Chief of Staff for Installation Management (OACSIM) sponsor NID.

### **OBJECTIVE**

Reporting of all installation dams is required by:

- AR 420-72 Transportation Infrastructure and Dams, 1 May 2000,
- Public Law 104-303, Water Resources Development Act of 1996,
- Public Law 92-367, National Dam Inspection Act of 1972,
- Presidential Memorandums, Dam Safety, 23 April 1977 and 4 October 1979, and
- Federal Emergency Management Agency, (FEMA) Guidelines on Dam Safety.

The U.S. Army Dam Inventory report is used to meet the Army reporting requirements of Public Law and to manage the Army inventory of dams to meet mission and life safety requirements.

### **BACKGROUND**

The ERDC coordinates with Army Installations and OACSIM to provide a uniform and cost-effective system for managing the Army Installation Dam Inventory. The NID is used by all states and Federal Agencies to report Dams. Installations are responsible for funding Dam inspections every five years.

### **IMPLEMENTATION ASSISTANCE**

U.S. Army Engineer Development and Research Center, Waterways Experiment Station (WES), U.S. Army Corps of Engineers provides training classes, workshops and technical and reporting assistance on NID. OACSIM provides policy assistance and coordinates with FEMA on inventory and inspection requirements.

### **POINTS OF CONTACT**

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## **NON-TACTICAL VEHICLE REQUIREMENTS FORECASTING SOFTWARE (1577 REPORT)**

### **DESCRIPTION**

NON-TACTICAL VEHICLE REQUIREMENTS FORECASTING SOFTWARE (NTV) APPLICATION is a web based database software application that provides vehicle-forecasting capability to installation level vehicle owners/administrators. The application provides consolidated management and forecasting capability to the MACOM, TACOM and HQDA. The NTV Application requires a computer with an Internet Browser and access to the Internet originating from \*.mil domain.

### **OBJECTIVE**

To provide installation vehicle owners and MACOMs, TACOM and HQDA the capability to:

- Implement exclusive automated means to manage the NTV fleet and project future vehicle and budget requirements.
- Electronically calculate and produce the DA Form 3665 (RCS CSGLD-1577) report.
- Eliminate extensive multiple agency coordination efforts and reduce resources to identify demographic vehicle data.
- Establish centralized data storage, access, and update/modification to stakeholders.
- Eliminate data calls to subordinate commands/agencies for information to support "what if" drills to support Congressional Funding and Budget requirements and inquiries.
- Implement roles to provide access according to stakeholder status and business rule.
- Use computer technology to eliminate computational errors.
- Implement rules at the application and database levels to enforce Army policy and procedure for NTV management.
- Utilize real time data.

### **BACKGROUND**

Under the provisions of AR 58-1, Department of the Army agencies must submit a DA Form 3665 report (Annual Commercial Design Motor Vehicle Requirements Review) through several command levels to reflect current fiscal year through 7 subsequent FY requirements. This report's accuracy is crucial to garner continued congressional funding to support Army base operations and soldier support functions.

The manual process wastes considerable resources at each command level because it requires staff officers to annually conduct repetitive coordinative efforts and prepare manual reports to obtain vehicle replacement funds. Due to voluminous non-automated vehicle data and the manual calculation process, requirement quantities are prone to errors.

Finally, the current business methodology reduces orderly processing by preventing decentralized processing.

### **CURRENT STATUS**

The NTV Application is currently in production as an Army-enterprise application supporting 23 MACOMs and their subordinate installations/activities. FORSCOM serves as the interim application host via MOA with TACOM.

## MILESTONES AND PLANS

The NTV Application will report Army NTV fleet projection for the End FY02 submission in accordance with the revised AR58-1.

## POINTS OF CONTACT

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## **PARAMETRIC COST ENGINEERING SYSTEM (PACES)**

### **DESCRIPTION**

PACES is a parametric cost estimating system which is used primarily for development of programming or budgetary cost estimates in support of MILCON Program such as military facilities, family Housing, medical, and operation and maintenance projects.

The PACES system uses a parametric methodology adjusting cost models for estimating project costs. The cost models are based on generic engineering solutions for building and site work projects, technologies, and processes. The generic engineering solutions were derived from historical project information, government laboratories, construction management agencies, vendors, contractors, and engineering analysis. When you create an estimate in PACES you tailor the generic engineering solutions to reflect specific quantities of work and the quantities of work are priced using current cost data.

The PACES is a comprehensive program incorporating cost models for new construction, alteration, and renovation.

### **OBJECTIVE**

PACES was designed to provide engineers, managers, estimators, and technical support personnel an easy to use tool to quickly develop programming or budget estimate for Milcon projects when little or no design information is available to develop a detailed cost estimate and to assist in control of the budget.

### **BACKGROUND**

The U. S. Air Force under the technical direction of HQ AFCESA and HQ USAF/CE developed PACES. Initial PACES development began in 1981 and culminated in 1983 with the release of PACES Version 1.0, which contained building and site work cost models and operated on a DOS platform. The current system release, Version 3.1, released July 1996, contains approximately 100 cost models and several system enhancements.

A WINDOWS based system was developed and released in June 1998 as PACES 99 This version incorporated new models (Education Center/Classroom, Fire/Crash Rescue, Control Tower, Squadron Ops, and Gymnasium), updated models (Headquarters, Dormitory, BOQ, Admin, High Bay Warehouse, and BCE Complex), system interface and functionality enhancements (new graphical user interface, five level hierarchy for organizing estimate and reporting, and cost database update. Since then, PACES 2000 and PACES 2001 versions have been released including updating of existing models, database updates, importing and exporting feature, renovation estimating module, and addition of reports capability. PACES version 2002 is scheduled for release in April 2002.

### **SYSTEMS INTERFACE**

PACES currently interacts with a small number of cost estimating and project management systems used by the Air Force, USACE, and other DOD agencies. It also interfaces with PC Cost and the USACE Cost-Risk program. The future version is to have the system easily interface with several more systems such as MCACES II, MS Excel, and MS Project.

## HARDWARE/SOFTWARE REQUIREMENTS

Your hardware/software must meet the following requirements to support access and use of PACES 99.

- Pentium 133MHZ (166 or above)
- 64(or higher) Megabytes of RAM
- 50 Megabytes of hard disk space (100 or above recommended)
- CD ROM Drive
- Windows 95/98/NT operating system

## DISTRIBUTION

PACES software and database is distributed by the Air Force to all current registered users. Copies of the software are generally obtained by attending a PACES training class. PACES is a licensed commercial rights product available free within the DOD Tri-Services and its contractors only.

## POINTS OF CONTACTS

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## **PROGRAM ADMINISTRATION AND EXECUTION SYSTEM (PAX)**

### **DESCRIPTION**

The Programming Administration and Execution (PAX) System provides the U.S. Army with an Information Technology (IT) web-based, browser accessible portal environment with automated tools to allow engineers throughout the world to develop, estimate, justify, submit, review, approve the then track the Army's annual construction program budget submissions. PAX supports the DD Form 1391 Processor, the Construction Appropriations Programming Control and Execution System (CAPCES), the Economic Analysis System (ECONPACK), the PC-COST system, the DIRECTIVE Network (DIRNET) system, the Congressional View web environment, and the Accounting Control System (ACS). These applications allow engineers to track (design, construction, and fiscal information from project submission through construction completion and fiscal closeout) construction projects for the Army, including USACE MSCs

### **BACKGROUND**

PAX was initially fielded in February 1982. The third PAX IT contract (a five-year contract) was awarded to Electronic Data Systems (EDS) in October 1996. The PAX IT contract has been all encompassing. PAX contract mandatory requirements always included world-wide access (CONUS, Europe, Far East, Central/South America, etc), a world-wide teleprocessing network, local dial-up access, 24 hours a day/seven days a week availability, reliability that is virtually 100%, and catastrophic backup and recovery requirements (failure recovery mechanism). After 20-plus years on a commercial platform, PAX transitioned to began operating on a government-owned, contractor operated platform at the Defense Information Systems Agency (DISA) mega center in Mechanicsburg, Pennsylvania, on 4 March 2002.

### **CURRENT STATUS**

There are approximately 1000 PAX user customer IDs worldwide. PAX provides its customer users with access to a wide variety of software products, including fourth generation Data Base Management Systems (DBMS), both hierarchical and relational. The DBMSs are the latest commercially available. They are "user-friendly" (easy to use), end user tools for self-service and ad-hoc requirements, and the key to successful business support systems.

Following is a brief description of PAX system characteristics.

- The Applications. PAX applications are stand-alone and individually managed. However, data is routinely exchanged between applications.
- Web-based browser access to all aspects of the system and applications.
- A secure, mainframe database server environment with UserID and multiple Password control.
- NIPRNET and Internet connectivity.
- Full file backup and alternate site support for COOP and other emergencies.

### **PLANS AND MILESTONES**

As a fully web based system, current plans include integration with the Army portal.

## POINTS OF CONTACT

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## PC-COST ESTIMATING PROGRAM (PC-Cost)

### DESCRIPTION

PC-Cost is a cost estimating software program which assists in preparing detailed design cost estimates for Military Construction projects. The PC-Cost program permits estimates to be prepared in electronic format compatible with the DD1391 and ENG3086 Modules on the Programming Administration and Execution (PAX) System.

### BACKGROUND

PC-Cost version 1.00 was fielded in May 1995 and current version 4.10 was released in July 2001. The PC-Cost software can be downloaded from within the PAX/DD1391 Processor System.

### OBJECTIVE

When utilizing PC-Cost, users may:

- Perform cost estimate calculation based on the methodologies described in TM 5-800-4, Programming Cost Estimates for Military Construction.
- Enter, modify and copy information for budget estimates.
- Automatically upload/download data between the ENG3086 and DD1391 Modules and the PC-Cost program.
- Search and retrieve data from the Facilities Cost Guide, Category Codes, Installation Lists, Area Cost Factors, and MCP Indices.
- Apply appropriate adjustment factors to Cost Guide-derived data or to user-entered data.
- Prepare building alteration cost estimates based on the building work breakdown structure (WBS).
- Import data from PACES or MCACES GOLD Project Estimates and Site Assemblies Databases.
- Generate 2- and 3-level reports from budget estimates.
- Perform quick “what ifs” in response to customer's last minute requests.

### INTERFACES

PC-Cost makes available to its users MCACES Gold and a PACES import option to allow for more detailed cost estimates. The ultimate goal for PC-Cost is to export the cost estimate into either an ENG3086 or a DD1391 Form.

### PLANS AND MILESTONES

Users will be able to interface with a modified version of PC-Cost while editing Tab A of the DD1391 Form or while editing the ENG3086 Form before the end of FY02.

### POINTS OF CONTACT

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## **REAL PROPERTY PLANNING AND ANALYSIS SYSTEM (RPLANS)**

### **DESCRIPTION**

The Real Property Planning and Analysis System (RPLANS) is an automated planning system that consists of three major views or components designed to meet the needs of users at installation, major command (MACOM) and Headquarters, Department of the Army (HQDA) levels. Users at each level share a common need to correlate data about real property assets, installation force structure and populations, and facility allowances and requirements.

Installation RPLANS is an facility level, integrated, automated master planning tool that provides planners and programmers with the capability to readily and efficiently calculate peacetime facility space allowances and compare them to available real property assets for a wide range of facility types. RPLANS is the official source for allowance data and the official repository for requirements data at installation level. RPLANS satisfies the requirement for an installation tabulation of existing and required facilities (TAB) mandated by AR 210-20.

MACOM RPLANS (MCRPLANS) provides MACOMs a UIC level view of installation RPLANS sites within their command. MCRPLANS is used for reviewing and approving installation requirements edits, analyzing proposed construction projects and similar management tasks. It is the database of record for approved requirements.

Headquarters RPLANS (HQRPLANS) calculates facility allowances at all Army locations worldwide by Facility Category Group (FCG). HQRPLANS integrates population, real property assets, space planning criteria and planned new construction from official sources to develop a Tabulation of Existing and Required Facilities (TAB) for each Army location. The TAB identifies existing facility assets, calculated allowances, edited requirements and new construction to determine excesses and shortfalls by location. This data helps support HQDA decisions on Military Construction, Stationing/Re-stationing, Base Realignment and Closure (BRAC), Installation Status Report (ISR) Quantity Ratings and Installation Master Planning across the Army.

### **OBJECTIVE**

The Army has identified a need to automate and standardize the master planner's access to existing facilities data in support of both planning and programming activities. Installation RPLANS provides automated support for master planning activities to include site planning, TAB preparation, construction program development, stationing analysis, unit/organization facility requirements analysis and space utilization. Installation RPLANS also provides the capability to edit requirements in cases where calculated allowances do not fully account for mission, equipment or personnel impacts on infrastructure. MCRPLANS provides an automated process that allows interactive review and approval or modification of edited requirements by the MACOMs. HQRPLANS provides an automated capability focused on existing and future force structure and current and programmed facilities to allow planners at all levels a way to analyze, evaluate and validate installation facility requirements using consistent corporate data and criteria.

### **SYSTEMS INTERFACE**

Data Sources include:

- Installation Facility Requirements – Input by installation RPLANS users (Installation RPLANS



only)

- Army Stationing and Installation Plan (ASIP)- current and future population by location
- Integrated Facilities System (IFS)- current active Army and Army Reserve real property assets (Installation RPLANS and MCRPLANS)
- Planning Resource for Infrastructure Development and Evaluation (PRIDE) - current ARNG real property assets
- Headquarters Executive Information System (HQEIS)- current active Army and Army Reserve real property assets (HQRPLANS only)
- Army Criteria Tracking System (ACTS)- space planning criteria
- Facility Planning System (FPS)- military grade distribution and unit allowances by facility for Army units and organizations
- Defense Eligibility Enrollment Reporting System (DEERS)- marriage factors
- Training Evaluation and Support System (TESS)- Reserve Component Annual Training loads by location (data provided with the ASIP)
- Five Year Development Plan (FYDP)- planned new construction, new footprint
- Army Range Requirements Model (ARRM)- Range and Maneuver Land Requirements

Installation RPLANS provides feeder data to:

- MACOM RPLANS – installation requirements and assets
- Installation Status Report (ISR) – raw assets (IFS), FCG requirements (HQRPLANS) and prior year ISR quality ratings (HQRPLANS) pulled using the ISR extract program in the RPLANS Administrator

MCRPLANS provides feeder data to:

- HQRPLANS – MACOM approved installation requirements

HQRPLANS provides feeder data to:

- Installation RPLANS - facility allowances and approved requirements
- Real Property Planning and Analysis System (RPLANS) - approved requirements and prior year quality ratings from the ISR
- Optimal Stationing of Army Forces (OSAF) model - installation profiles
- Facilities Degradation Model (FDM) - planned construction
- Army Flow Model (AFM) - active Army installation profiles and allowances for active TOE units by Unit Identification Code (UIC)
- Installation Support Cost Model (ISCM) - allowances for active Army TOE units by Standard Requirements Code (SRC)
- Essential Facility Requirements (EFR) Charts - installation profiles and buyout costs
- Range and Training Land Program (RTLTP) – range and maneuver land requirements
- Facility Planning System (FPS) – ASIP troop list and Army average UPH rates

## CURRENT STATUS

- Fully operational client server application
- Internet accessible by all levels of the Army with valid password
- Three level system: Installation, Major Command and Headquarters
- Access control
- HQRPLANS access approval by ACSIM, Plans and Operations Division
- MACOM access control managed by owning MACOM
- Installation access controlled by Installation RPLANS Admin client at RPLANS sites

- HQRPLANS updated twice annually in June and December
- Requirements edits submitted electronically by installations to MACOM pending database  
MACOM reviews and approves installation edits and posts to MACOM approved database
- Approved requirements pulled from MACOM RPLANS twice annually (15 May & 15 November)

## PLANS AND MILESTONES

- The system is currently operational.
- ARNG implements the use of RPLANS in the submission of requirements for the December 2002 update
- Realign RPLANS to support Centralized Installation Management (CIM)
- Facility Category Group (FCG) realignment to Facility Analysis Category (FAC) to allow for implementation of DoD Cost Factors

## POINTS OF CONTACT

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Linda Smith, Project Manager, ACSIM DAIM-MD, [Linda.Smith@hqda.army.mil](mailto:Linda.Smith@hqda.army.mil), 703 692-9222

Technical Hotline: [rplans@rkeng.com](mailto:rplans@rkeng.com), or [hqrplans@rkeng.com](mailto:hqrplans@rkeng.com)

Request access and download client (thin) software at <http://www.rkeng.com/downloads.asp>

## REIMBURSABLE PROGRAMS TRACKING SYSTEM (RPTS)

### DESCRIPTION

The Reimbursable Programs Tracking System (RPTS) provides a tracking mechanism for the fiscal management of the Army's reimbursable forestry, agricultural/grazing out lease, and fish and wildlife conservation resources. These natural resource programs involve Army installations, major Army commands (MACOMs), Army Headquarters (HQDA) functions, U.S. Army Corps of Engineers (USACE) Districts and Defense Finance and Accounting Service (DFAS) offices.

### OBJECTIVE

Prior to and throughout the fiscal year, HQDA builds budgets and tracks financial data related to program expenses, proceeds, State's entitlements, DoD Forestry Reserve Account (FRA) and other relevant financial information for Army and USACE Districts. Installations, MACOMs and USACE Districts involved in the reimbursable programs report initial expenses/proceeds estimates, and make, at a minimum, quarterly updates of these estimates. The data are tracked and analyzed for discrepancies between projected and actual amounts.

### SYSTEM INTERFACE

Data Sources include:

- The budget information is collected from each installation/MACOM and USACE District.
- Actual expenses/proceeds are collected for all installations, MACOMs, HQDA and USACE Districts at a central DFAS location who, in turn, enter Treasury verified figures at the end of each quarter for these activities.
- In addition to the reimbursable forestry and ag/grazing programs, there is also a module for the DoD FRA project process.
- Financial aspects of the Army's Fish and Wildlife Conservation program are shown in a separate module. Installations enter their program expense details here, as in the categories outlined in the Fish and Wildlife Conservation Fund guidance. Monthly DFAS financial statements provide timely records of treasury verified actual proceeds and expenses.

### CURRENT STATUS

- Fully operational as a World Wide Web based site

### PLANS AND MILESTONES

- Content is reviewed quarterly and updated as necessary

### POINTS OF CONTACT

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## **REMEDIAL ACTION COST ENGINEERING AND REQUIREMENTS (RACER) SYSTEM**

### **DESCRIPTION**

RACER is a parametric cost estimating system, which is used primarily for development of programming or budgetary cost estimates for environmental projects.

The RACER system uses a parametric methodology for estimating costs. The cost models are based on generic engineering solutions for environmental projects, technologies, and processes. The generic engineering solutions were derived from historical project information, government laboratories, construction management agencies, vendors, contractors, and engineering analysis. When you create an estimate in RACER you tailor the generic engineering solutions to reflect specific quantities of work and the quantities of work are priced using current cost data.

The RACER System is a comprehensive program incorporating cost models for Studies (PA/SI, RI/FS and RFI/CMS), Remedial Design, Remedial Action, Operations and Maintenance, Long Term Monitoring, and Site Work and Utilities.

### **OBJECTIVE**

RACER system was designed to provide engineers, managers, estimators, and technical support personnel an easy to use tool to quickly develop budget estimates for environmental projects when little or no design information is available to develop a detailed cost estimate.

### **BACKGROUND**

The U.S. Air Force under the technical direction of HQ AFCESA and HQ USAF/ILEVR developed RACER. Initial RACER development began in the Spring of 1991 and culminated in the Spring of 1992 with the release of RACER Version 1.0, which contained 22 cost models and operated on a DOS platform. A subsequent release, Version 3.2, was released July 1996, containing approximately 100 cost models and several system enhancements.

A WINDOWS based system was developed and released in December 1998 as RACER 99. This version incorporated new models (OEW, Building Decontamination & Demolition, Bioslurping, Composting, Natural Attenuation, Passive Water Treatment, and Permitting), updated Work Breakdown Structure, more comprehensive O&M estimates (estimate several common O&M cost categories for each applicable technology), system interface and functionality enhancements (new graphical user interface, five level hierarchy for organizing estimate and reporting, site wizards for treatment trains, reporting structure that shows cost by year and by phase/activity), and cost database update. Since then, RACER 2000 and RACER 2001 versions have been released including updating of existing models, database updates, importing and exporting feature, new comment fields, auto update of prior year project costs, addition of a phytoremediation model, and addition of reports capability. RACER, version 2002, will be released in June 2002.

### **SYSTEMS INTERFACE**

RACER currently interacts with a small number of cost estimating and project management systems used by the Air Force, USACE, and other DoD agencies. It also interfaces with MS Excel and the USACE Cost-Risk program. The future version is to have the system easily interface with several more systems

such as MCACES, and FUDSMIS.

## HARDWARE/SOFTWARE REQUIREMENTS

Your hardware/software must meet the following requirements to support access and use of RACER 2001

- Pentium 133MHz (166 or above recommended)
- 16 MB RAM (32 or above recommended)
- 50 MB free hard disk space (100 or above recommended)
- CD ROM drive
- Windows 95/98/2000/NT operating system
- MS Office 97 or 2000 (minimum requirement: Excel 97)

## DISTRIBUTION

RACER is distributed by the Air Force to all current registered users. Copies of the software are generally obtained by attending a RACER training class. This is a licensed commercial rights product available free within the DOD TriServices and its contractors only.

## POINTS OF CONTACTS

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## **RESTORATION COST-TO-COMPLETE SYSTEM (RCTCS)**

### **DESCRIPTION**

The Restoration Cost-to-Complete System (RCTCS) is a web-based application designed to track restoration clean-up cost by site and phase for the life of a restoration project. The application allows Army Installations, Major Commands (MACOMs) and Major Sub Commands (MSCs) to participate directly and electronically in data entry, review and approval of CTC estimates.

### **OBJECTIVE**

RCTCS is the Army's official reporting tool to track Cost-to-Complete (CTC) requirements from initial to final reporting. It is used by Installations and their respective MACOMs to annually update their CTC estimates. The Army Environmental Center (AEC) uses RCTCS as a management tool to determine restoration cost and phase data inconsistencies. RCTCS serves as a baseline to establish the restoration funding to the MACOMS and Installation.

### **SYSTEM INTERFACE**

- Data Source includes:
- Historical Data with Recurring Costs
- RACER Estimates
- Feasibility Studies
- Existing Contract
- Independent Government Cost Estimate
- Memorandum for Record
- Other DoD 5000.61 Validated Cost Models
- Supporting Documentation

RCTCS Provides criteria data use in:

- The Defense Environmental Site Restoration Tracking System

### **CURRENT STATUS**

- Fully operational
- Accessible to selected Army personnel via the world-wide-web.
- Content is reviewed and updated annually

### **PLANS AND MILESTONES**

- RCTCS will be combined with DSERTS into one system, DSERTSii.

### **POINTS OF CONTACT**

Keisha R. Harris, Functional POC, SFIM-AEC-IER, keisha.harris@aec.apgea.army.mil, 410 436-6372

Patrick Hahm, Technical POC, SFIM-AEC,IEA, Patrick.hahm@aec.apgea.army.mil, 410 436-6325

## **HEADQUARTERS REVISED ARMY DUERS DATA SYSTEM (HQRADDS)**

### **DESCRIPTION**

The Headquarters Revised Army DUERS Data System (HQRADDS) is an automated engineering management system that collects energy consumption data for active Army, Reserve and National Guard installations. HQRADDS supports DA and DOD energy reporting requirements. HQRADDS also provides management and analysis data to installation, MACOM and Army managers.

HQRADDS is an automated system accessed through the World Wide Web. HQRADDS is used by installation reporters to enter utility usage and petroleum consumption, prepare local reports and to create the Army-wide database. The Oracle based Army database provides reports to MACOMs and DA users and is the source of the Army data sent to DOD.

### **OBJECTIVE**

HQRADDS has two objectives: first to provide energy managers at installation, MACOM, and HQDA with data to analyze and manage energy use and second to report energy to DOD.

### **BACKGROUND**

DOD requires energy consumption data to be reported in a specified format. HQRADDS was developed to reduce the cost of energy reporting.

### **SYSTEMS INTERFACE**

HQRADDS data is transferred to the Defense Utility Energy Reporting System (DUERS).

### **CURRENT STATUS**

HQRADDS is fully operational using ORACLE version 8i.

### **PLANS AND MILESTONES**

The system is in maintenance mode. Upgrades will be made as necessary to comply with DA and DOD requirements.

### **POINT OF CONTACT**

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## **SUPPLY 2000 (COTS)**

### **DESCRIPTION**

The concept is to link Supply 2000 a COTS (Commercial Off The Shelf) package to the Integrated Facilities System – Client Server (IFS-CS). Supply 2000 can reside on the IFS server. It is a client/server system using Oracle Forms and an Oracle database. Clients can be Windows '95, '98, Windows NT or Windows 2000, while the server will use Solaris UNIX as an operating system.

Supply 2000 uses Automatic Identification Technology (AIT) to create and read bar code labels for storage bins, receipts and issues. Supply 2000 has the capability to read both standard army bar codes (3 of 9) and the UPC that commonly are printed on most material. All reports, using Oracle Reports, conform to plain paper output on laser printers. Supply 2000 software will move the supply function to the IFS server; track the use of Operation and Maintenance, Army (OMA) funds and credit cards. Supply 2000 will allow the installations to operate their Stock Record Accounts (SRA) with software that will be continually updated and meets industry standards.

### **OBJECTIVE**

- To manage, the purchase, receipt, storage and disposition of the inventory of materials and supplies required for DPW facility maintenance as required by AR 420-18.
- Issue materials requested for work orders, service orders and troop issues
- Report material and cost information to the IFS Job Cost Accounting module.
- Additionally Supply 2000 receives Bills of Material (BOM) from the Work Estimating application.

### **BACKGROUND**

A detailed workshop held 15-23 October 1998 evaluated readily an available Supply COTS package, known as Supply 2000, to serve as a replacement for the current IFS Supply. Representatives from COE, USAREUR, FORSCOM, USMA, Fort Hood, Fort Meade and Fort Drum, participated in the review and were unanimous in their recommendation that the Supply 2000 software package be purchased, integrated and deployed in support of DPWs. In response and as a further validation test, the Supply 2000 COTS package was deployed to the US Army Military Academy DPW in November 1998. The Supply 2000 software performed well in the live environment with the DPW Supply Division Chief stating that the COTS was a mega-improvement from the IFS Supply Module. The ACSIM funded and US Army Corps of Engineers Installation Support Center contracted to purchase the Supply 2000 COTS for the DPW Supply community. Deployment of Supply 2000 commenced in the spring of 1999.

### **SYSTEMS INTERFACE**

Supply 2000 has interfaces with:

- STANFINS (Standard Army Financial System),
- HSMS (Hazardous Material Management System),
- DAAS (Defense Automated Addressing System),
- SAACONS/SPS (Standard Army Automated Contracting System/Standard Procurement System),
- IFS Job Cost Accounting and IFS Work Estimating.
- Supply 2000 also interfaces to DLA's MRO Prime Vendor program.



Supply 2000 provides interface files for transmitting financial information to STANFINS. In addition, Supply 2000 receives and provides requisition and order confirmation data files for interfacing with SAACONS/SPS and MRO Prime Vendor. Supply 2000 also interfaces with the IFS Work Estimating and Job Cost Accounting modules to identify supply requirements and material costs expended to a job.

#### CURRENT STATUS

Supply 2000 is currently operational at 91 sites: 51 in CONUS; 26 in USAREUR; 11 in Korea; 2 in Japan; and 1 in Okinawa. Supply 2000 has upgraded its client software to Oracle 6i to keep pace with the increased tempo of improvements in databases technology.

#### PLANS AND MILESTONES

Current plans calls for the continued refinement and upgrading of Supply 2000. Available now is the BOM Estimating module of Supply 2000.

#### POINTS OF CONTACT

Larry Black, Army Proponent, DAIM-FDF-E, [larry.black@hqda.army.mil](mailto:larry.black@hqda.army.mil), 703-428-6173.  
Logistics Data Resources, Inc., Technology Point Of Contact, [support@logdata.com](mailto:support@logdata.com), help lines 804 526-1100

## **SUPPORT FACILITY ANNEX (SFA) SYSTEM**

### **DESCRIPTION**

SFA system is an electronic library of technical readiness reports on various major or directed Army materiel systems. The SFA system is used in conjunction with ACSIM Automated Planning Tools under the Real Property Planning System (RPLANS) subset Facility Planning System (FPS) IAW AR 210-20 and AR 415-15.

The Support Facility Annex (report document) is a required facilities assessment component of the Integrated Logistic Support Plan (ILSP)/SSP IAW AR 700-127.

Each SFA Report is a "living report" that serves both the force development/materiel and installation/real property management communities. Each report "evolves" as the materiel end-item design and support architecture progresses through the development cycle. It provides the longest lead-time information possible. When a new or modified materiel system(s) replaces an existing system(s), the SFA report compares the requirements (training, operations, logistics, and people) for each system against current facility criteria and standards. Any conflicts and projected impacts are noted.

The SFA describes a materiel system, including associated support items of equipment. It also describes the potential facility implications associated with fielding the materiel end-item in separate categories such as training, maintenance, storage and day-to-day operations.

### **OBJECTIVE**

Materiel Acquisition Process. The SFA provides direct support to the ASA (RDA) and HQDA DCSLOG. The SFA serves as the facility requirements analysis, evaluation and order of magnitude cost report associated with materiel fielding for the Program Manager or Program Executive Officer for each system selected.

It is also the basis for developing an "F" Record under LSA/LSAR when a materiel end-item is completing a full 1388A or 1388B-process requirement.

The intent is: To influence the materiel system design and support architecture.

To reduce potential real property challenges that could result from fielding.

Identify the potential order of magnitude cost to fielding.

A means of reporting information to the field with the longest lead-time possible to prepare for materiel fielding.

Is a feeder document to the MACOM Materiel Fielding Plan (MFP) development and for the updating of the Force Modernization Master Plan (FMMP).

The SFA is a designated annex the MACOM Range and Training Land Program Training Investment Strategy (RTLPTIS). MACOM staffs use the ILSP to determine all direct and related support requirements captured in Materiel Fielding Plans (MFP) prepared by the gaining MACOM.

### **BACKGROUND**

USACE Support to Army Force Modernization and Readiness. The HQUSACE Force Modernization Group, Engineering and Construction Division, Directorate of Military Programs, HQUSACE was

established in 1980 to identify facility requirements associated with fielding new or modified materiel systems. The Director of Military Programs in 1990 realigned and tasked the Combat Readiness Support Team (CRST) to provide management and oversight of the SFA, its content, and its functionality. The Chief of Engineering and Construction also tasked CRST to make more proactive in resolving installation facility issues. The new CRST task is a realignment of previous Chief of Engineers responsibilities in several functional areas including the Army/Marine Range and Training Land Program, Army Force Modernization Program, and aspects of the DA Facilities Standardization Program that relate to USACE support to Army Readiness. CRST is currently under the Planning Branch, Installation Support Division, Directorate of Military Programs, HQUSACE.

SFA Library. The library was placed on the PAX system (without graphics) for worldwide access. In 1987, the SFA began production as a joint Government-Industry product and service line and has expanded under the direction of the Chief of Engineering and Construction.

The SFA development and funding were subsequently separately managed and funded between ACSIM and USACE. CRST retained the responsibility to manage SFA development. A SFA library is still in support of the ACSIM's Facility Planning System (FPS), a subset of the Real Property Planning System (RPLANS). These are formatted to the PAX system without graphics.

The Army continues to field new or modified materiel systems as it transition from the Legacy Force to the Objective Force. The SFA is now the recognized basis for planning and programming facilities that support materiel system Army-wide.

## SYSTEMS INTERFACE

A library of SFAs is available under the Real Property Planning System (RPLANS) subset Facility Planning System (FPS) on the INTERNET at <http://rkeng.com>. A new cross-reference feature between the FPS and SFA has been added. This feature allows a FPS user to generate a list of Support Facility Annex reports that are applicable to TOE units selected for FPS analysis.

## CURRENT STATUS

There are over 90 SFA reports published and other reports are currently being prepared as new or improved materiel end-item program progress. The number of published SFA database will continue to grow as needed and funded.

## PLANS AND MILESTONES

Procedures to use the SFA Report are already in-place and some new business procedures are under development. These "living" SFA documents are undergoing its own transformation to migrate from a purely descriptive report to a limited prescriptive and proactive format.

CRST's SFA Management Plan. The plan outlines major changes to the SFA Report to:

- Migrate from a purely descriptive report to a limited prescriptive and proactive format. The SFA will provide necessary and coordinated recommendations and suggestions on which facility standards or criterion to be used to meet potential impact or shortfalls will be provided to the user.
- Overhaul the electronic files to be web-centric and "portable" to the various "customers" for incorporation into "corporate" databases and/or local web sites is under evaluations. The new format change will have interactive Graphics capabilities as well as a new distribution media via the Internet and by CD.

All new SFA reports and selected existing SFA Reports will be formatted to a new SFA redesign format. A redesign SFA Report is complete for the SFA-95 Tactical Unmanned Aerial Vehicle. This SFA has been forwarded to the field by PM-TUAV for use in developing facility requirements. SFA-95 is currently at MANTECH (SFA support contractor website) <http://206.65.236.80/menu.htm>. A CD copy of SFA-95 is also available from MANTECH.

USACE Support to the Army System of System/Unit Set Fielding (SoS/USF). Current Army Force Management Integration business re-engineering consideration is to use the SFA as the ACSIM/ODCSPRO installation and facilities VALIDATION tool for identifying, defining, and prioritizing requirements under SoS/USF initiatives.

ACSIM - Use of the SFA is a three-fold effort. First, the decoupling of the SFA from RPLANS (or more specifically the FPS calculation model) is yet to be resolved. Second, the SFA's role with regards to installation and facilities VALIDATION to implement Army SoS/USF ICW ODCSPRO continues to evolve. And finally, there is the use of the SFA on the MILCON side of the house, which will evolve as the integration of the EE PEG much the same as the TT PEG matures.

ODCSPRO - The formal use of the SFA as the installation, infrastructure, and facilities VALIDATION report continues to evolve in concert with the policies and procedures associated with implementation of SoS/USF. The SFA is also intended to serve as the basis for conducting site surveys under the USF process. As both the SoS (validation) and USF (site survey) aspects of the new Army directive evolve, the role and use of the SFA will also evolve and solidify.

USACE - There is NO change in the HQUSACE use of the SFA in support of MCA (IAW AR 415-15), Real Property Master Planning (IAW ARs 210-20 and 210-21), and as a reference for standards and criteria development. However, the emerging role of Centers of Standardization and Mandatory Centers of Expertise (COSs/MCX) under the SoS/USF implementation process will add to the current usage of an SFA as a requirements VALIDATION tool for USACE.

Other Staff Activities - The SFAs use as an installation and facilities VALIDATION tool is a totally new venue. The SFA's broad coverage now offers an opportunity to serve as a single facility and installation requirements data source. How each office uses the SFA is a combination of policy and procedure and has yet to be defined. However, the logical extension is that if ODCSPRO and ACSIM intend to use the SFA as the data source for determining installation and facilities requirements, it can also serve as yet another reference for developing budgeting, prioritization, and allocation decisions. SFA Management Plan's proponent and funding responsibilities are currently under consideration between DSCPRO-ASCIM-USACE in support of SoS/USF.

## POINTS OF CONTACT

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Claude Matsui, Functional Proponent, CRST Team Leader/DA Program Coordinator ATF, HQUSACE CEMP-IP (CRST), [Claude.I.Matsui@usace.army.mil](mailto:Claude.I.Matsui@usace.army.mil), 202 761-5750

## **THEATER CONSTRUCTION MANAGEMENT SYSTEM (TCMS)**

### **DESCRIPTION**

TCMS is an automated military engineering construction planning and execution support system for use in the theater of operations and other OCONUS contingencies requiring austere, temporary facilities. AFCS provides standard designs, construction planning data for troop construction, bills of materials, and specifications to support contractor construction.

TCMS runs on Personal Computers (PCs) in the DOS/Windows/NT operating environment. It provides an interactive, user-friendly program to use the Army Facilities Components System (AFCS) designs and data to plan, design, and manage the execution of construction of facilities for any deployable unit in the Army for contingency or OOTW (Operations Other Than War) operations.

The AFCS Design Files and Data Base contain updated drawings and construction data that was previously used to prepare:

- TM 5-301, Four climate-oriented volumes of engineer planning data (no longer published; information is contained in TCMS);
- TM 5-302, Five volumes of designs for austere installations and facilities (no longer published; information is contained in TCMS);
- TM 5-303, Bills of Materials (no longer published; information is contained in TCMS);
- TM 5-304, User's Guide;
- Theater of Operations Guide Specifications (TOGS);

### **OBJECTIVE**

TCMS delivers the AFCS engineering and construction information for use in a theater of operations and provides military planners, logisticians, and engineers with the tools necessary to plan, design, and manage theater construction projects using a computer. It supports the following functions:

- Identification of facilities or installations required to support operations.
- Acquire, assemble, and transport material to the theater of operations.
- Management of construction in the theater of operations that is suitable for a variety of tactical and climatic conditions.
- Provide a connection between engineers and the Army's wholesale and retail supply systems.
- Provide the necessary drawings and specifications to support contract construction in the theater of operations.

### **BACKGROUND**

The Office of the Chief of Engineers (OCE) is the Army Staff proponent for TCMS. Program management is provided by HQUSACE, Readiness Branch. The Huntsville Center is responsible for the maintenance, enhancements, and distribution of TCMS and for maintenance of the AFCS drawing files and database. The TCMS supports the development of Civil Engineer Support Plans (CESP) in theater OPLANS through a direct TCMS interface.

### **SYSTEMS INTERFACE**

TCMS supports the joint, deliberate planning process (OPLAN development) by providing the data for the Army portion of the Civil Engineer Support Plan Generator's (CESPG) facilities components file, and

Joint Engineer Planning and Execution System (JEPES).

In addition, each distributed TCMS provides a complete site adaptable design database. TCMS also includes and provides all software to support unit automation requirements from the engineer command down to battalion level with appropriate interfaces with supporting USACE offices, other commands and engineer staffs.

## CURRENT STATUS

The TCMS, including its AFCS designs and construction data is a mature system. Designs and data are revised to keep current with Army theater facilities requirements, engineer unit capabilities, and construction technology. The AFCS logistics database is updated with the Army Master Data File (AMDF) and Army Log files on a quarterly basis. TCMS is an operational system that is distributed to engineer units and Headquarters' engineer staffs and selected USACE organizations. The TCMS Web page address for update is: <http://www.hnd.army.mil/tcms/>

## PLANS AND MILESTONES

TCMS is continuously being enhanced to meet the needs of theater of operations engineer planning, design, and management. It currently operates in the Windows 3.1, 95 and NT environment and is being reworked to use the full 32 bit NT operating environment. TCMS will continue to be enhanced to be a compatible part of the sustainment engineering module of the Engineer Command and Control System.

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## **GLOSSARY**

ACSIM - Assistant Chief of Staff for Installation Management  
ACTS - Army Criteria Tracking System  
AEDB - Army Environmental Database  
AMC - Army Materiel Command  
ARGISS – Army Reserve Geographic Information Support System (ARGISS)  
ASIP - Army Stationing and Installation Plan  
BASOPS - Base Operations  
BIS – Army Bridge Inventory System  
BMAR - Backlog of Maintenance and Repair  
BUILDER – Building Engineered Management System  
CADD - Computer Aided Design and Drafting  
CAFMS - Computer Aided Facility Management System  
CAPCES - Construction Appropriations Programming, Control & Execution System  
CPDIAG - Cathodic Protection Diagnostics System  
CV – Congressional View  
DD 1391 - DD Form 1391 Processor System  
DIRNET – Directive Network  
DMAR - Deferred Maintenance and Repair  
DPW - Directorate of Public Works  
DSERTS - Defense Site Environmental Restoration Tracking System  
ECONPACK - Economics Analysis Computer Package  
EMAAR – Engineering Management Automation, Army Reserve  
ENBOSS – Engineer and Base Operations Support System  
EIS - Executive Information System  
EQR - Environmental Quality Report  
ERIS - Environmental Restoration Information System  
FIRMS - Fire Information Resource Management System  
FPS - Facilities Planning System  
FORSCOM - US Army Forces Command  
GDS - Geospatial Data Systems  
GIS-R - Geographic Information System-Repository  
GPIPER - Gas Pipe Management System  
HALO – Hazards of Asbestos and Lead Optimal Management System  
HEATER – Heat Distribution Systems Analysis Tool  
HOMES - Housing Operations Management System  
HQ-RPLANS - Headquarters Real Property Planning & Analysis System  
HOMES - Housing Operations Management System  
HQIFS - Integrated Facilities System - Headquarters Level  
HSMS - Hazardous Substance Management System  
IFS - Integrated Facilities System  
IMaGE – Installation Management Gateway Enterprise  
ISR - Installation Status Report  
ISR –II - Installation Status Report - Environment  
JOC - Job Order Contracting System  
MACOM - Major Command  
MCA - Military Construction, Army  
MCPRS - Military and Civil Progress Reporting System  
MICRO PAVER - Pavement Management System  
MRPM - Maintenance Resource Prediction Model

## GLOSSARY (Continued)

NAFISS - Nonappropriated Fund Information Standard System  
OMA - Operations and Maintenance Army  
OPA - Other Procurement, Army  
PACES - Parametric Cost Engineering System  
PAVER – Pavement Management System  
PAX - Program Administration and Execution System  
PC-COST - PC-Cost Estimating System  
RACER - Remedial Action Cost Engineering and Requirements System  
RADDS - Army Energy Systems - Revised Army DUERS Data System  
RAILER - Railroad Track Maintenance Management System  
RISER – Resource Information System, Engineer, Reserve  
ROOFER - Roofing Management System  
RPLANS - Real Property Planning & Analysis System  
RPMA - Real Property Maintenance Activity  
SDS - Spatial Data System  
SFA - Support Facilities Annex System  
SIDPERS - Standard Installation Division Personnel System  
STANFINS - Standard Army Financial System  
TACAPS - Theater Army Construction Automated Planning System  
TCMS -- Theater Construction Management System  
TRADOC - Training and Doctrine Command  
URR - Unconstrained Requirements Report  
USACE - US Army Corps of Engineers  
USAFAC - US Army Finance and Accounting Center  
USAREUR - US Army, Europe  
WPIPER - Water Pipe Engineered Management System